

**General Info**

, PHL

N 14° 30' 35.8 E121° 00' 49.9 Magnetic Variation: 1.2°W

Elevation: 75'

Public, Control Tower, IFR, No Fee, Rotating Beacon, No Customs

Fuel: 80-87, 100-130, 115-145, Jet A-1, Jet B

Repairs: Minor Airframe, Minor Engine

Time Zone Info: GMT+8:00 no DST

**Runway Info**

Runway 06-24 11188' x 197' concrete

Runway 13-31 6555' x 148' concrete

Runway 06 (61.0°M) TDZE 24'

Lights: Edge, ALS, Centerline

Stopway Distance 364'

Runway 13 (135.0°M) TDZE 25'

Lights: Edge, Centerline

Stopway Distance 197'

Runway 24 (241.0°M) TDZE 75'

Lights: Edge, ALS, Centerline

Stopway Distance 584'

Runway 31 (315.0°M) TDZE 42'

Lights: Edge, Centerline

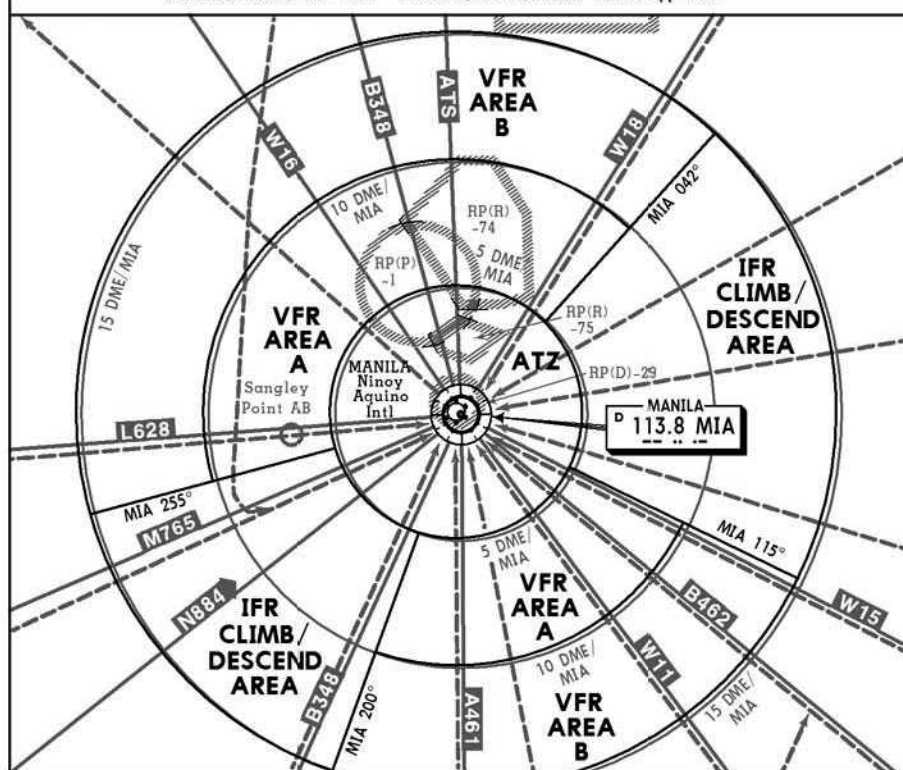
Stopway Distance 197'

**Communications Info**ATIS **126.4**Manila Tower **118.1**Manila Ground Control **121.9**Manila Ramp/Taxi Control **121.7**Domestic Ramp/Taxi Control **123.25**Centennial Ramp/Taxi Control **128.8**Manila Clearance Delivery **125.1**Manila Approach Control **119.7**Manila Approach Control **118.2** SecondaryManila Flight Service Station **54.475**Manila Flight Service Station **38.34**Manila Flight Service Station **124.0****Notebook Info**

## MANILA TRAFFIC CONTROL PROCEDURES

## COMMUNICATIONS

VFR AREAS Manila Twr 118.1 IFR CLIMB/DESCEND AREAS Manila App 119.7



## SECTOR ALTITUDES

IFR CLIMB/DESCEND AREA	VFR AREA A	VFR AREA B	ATZ
UNL	2000	2500	1999
GND	GND	GND	GND

## FLIGHT PROCEDURES

## AIRCRAFT SPEED CONTROL PROCEDURES

Within 30 nm of Manila VOR at FL 100 and below aircraft shall not exceed the following:  
Jet-250 Kts, Piston/Turbo Prop-180Kts. Restriction may be waived by ATC when traffic situation warrants.

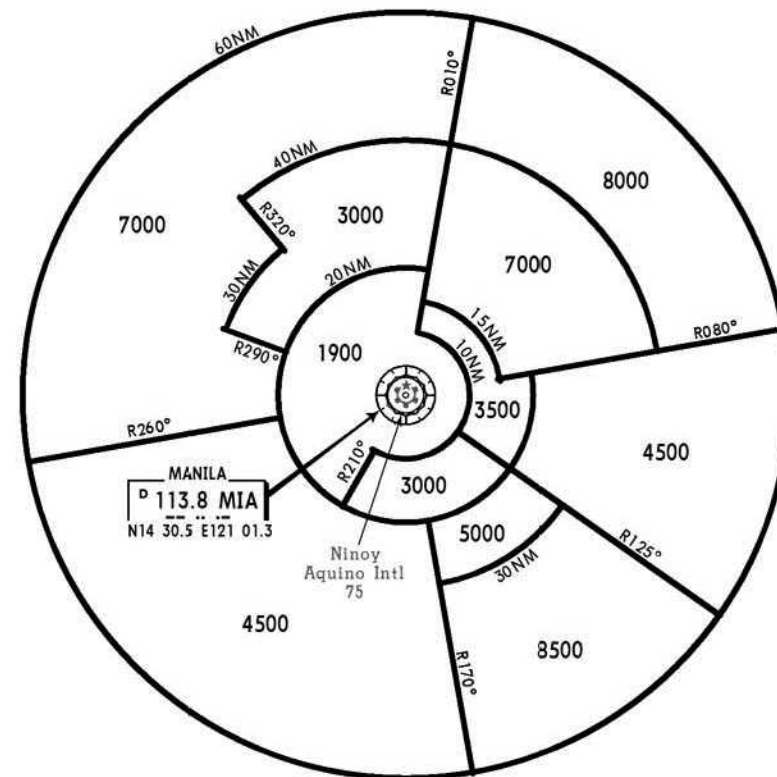
## VFR OPERATIONS:

1. Be equipped with 118.1 MHz transceivers and approach frequency 119.7 MHz.
2. Prior to entering the designated VFR areas, contact Manila Tower on 118.1 MHz.
3. Adhere to the established MIA VFR arrival/departure routings.
4. Maintain the required altitude of 2500 ft or below within 15 nm from the ARP. Cruise/climb to higher altitude shall be on a prior approval from Manila Approach.
5. When intending to transit the IFR climb/descend areas, contact Manila Approach on 119.7 MHz for the necessary clearance.
6. When requesting radar vector within 15 nm radius maintain 2500 ft unless otherwise instructed by Manila Approach Control.

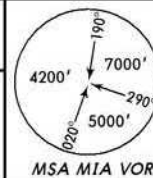
## IFR OPERATIONS:

1. The radar traffic circuit shall not penetrate the aerodrome traffic zone.
2. IFR traffic radar vector to final approach of runways 06/24 shall maintain 3500 ft prior to entering the IFR climb/descend area. Descent shall be made without violating the radar minimum vectoring altitude.
3. In the event of radar and/or communication failure, descent to 3000 ft shall be effected only in the designated VFR areas-10 miles from the ARP. Otherwise, follow the Lost Communication Procedures.

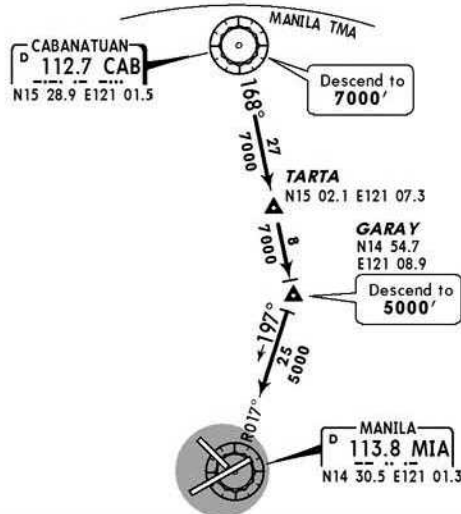
## MANILA MINIMUM VECTOR ALTITUDE CLEARANCE



ATIS **126.4** Apt Elev **75'** Alt Set: hPa Trans level: FL130 Trans alt: 11000'.



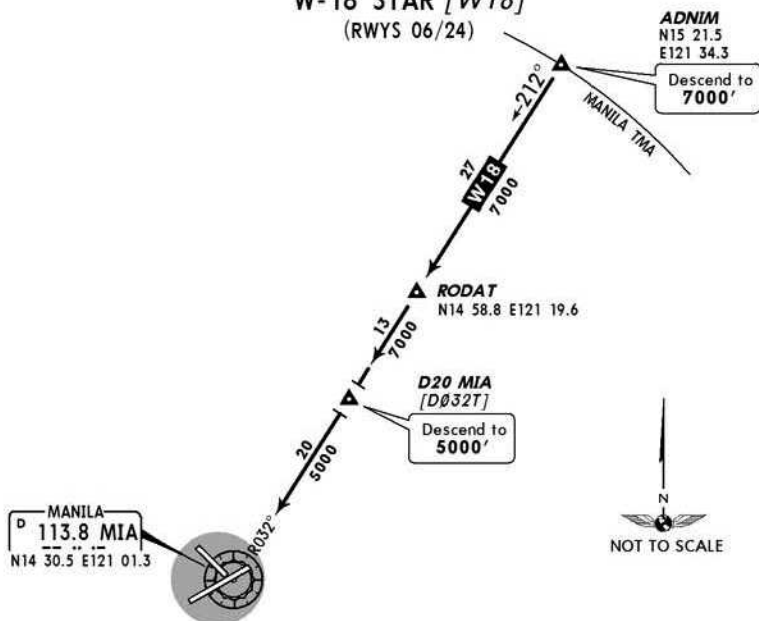
### CABANATUAN STAR [CAB] (RWYS 06/24)



#### ROUTING

At CAB, track out on the CAB R-168 to GARAY via TARTA. At GARAY, track in on the MIA R-017.

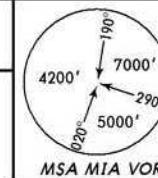
### W-18 STAR [W18] (RWYS 06/24)



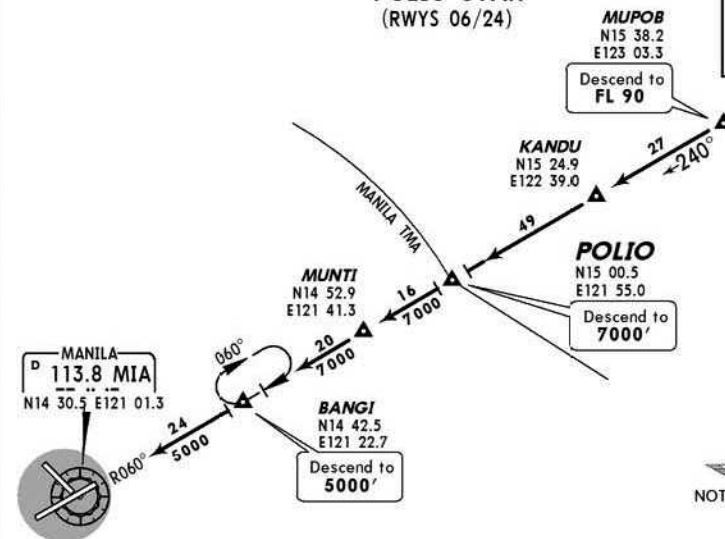
#### ROUTING

At ADNIM, track in on the MIA R-032 to D20 MIA via RODAT.

ATIS **126.4** Apt Elev **75'** Alt Set: hPa Trans level: FL130 Trans alt: 11000'.



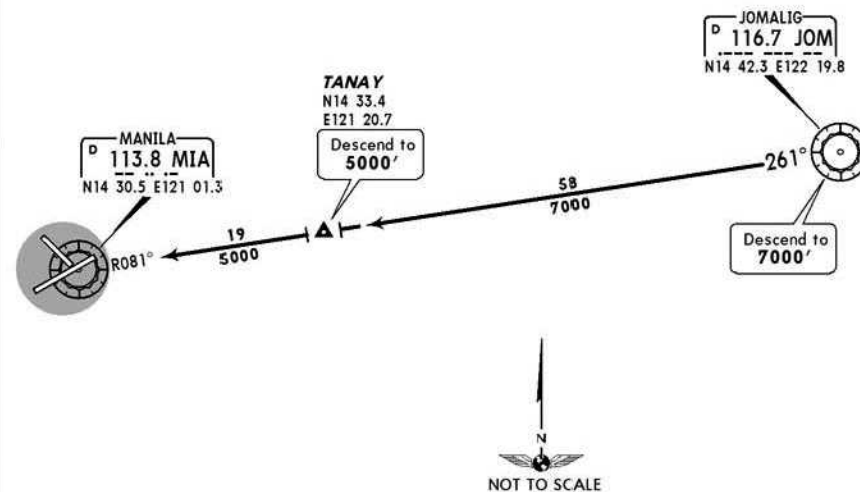
### POLIO STAR (RWYS 06/24)



#### ROUTING

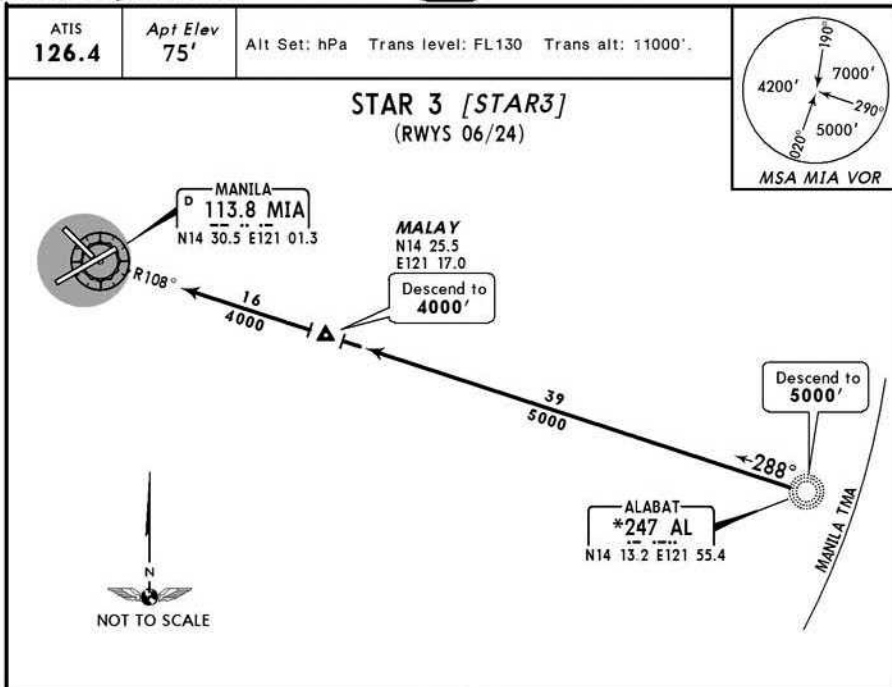
At MUPOB, track in on the MIA R-060 to POLIO. At POLIO, proceed to BANGI via MUNTI.

### STAR 2 [STAR2] (RWYS 06/24)



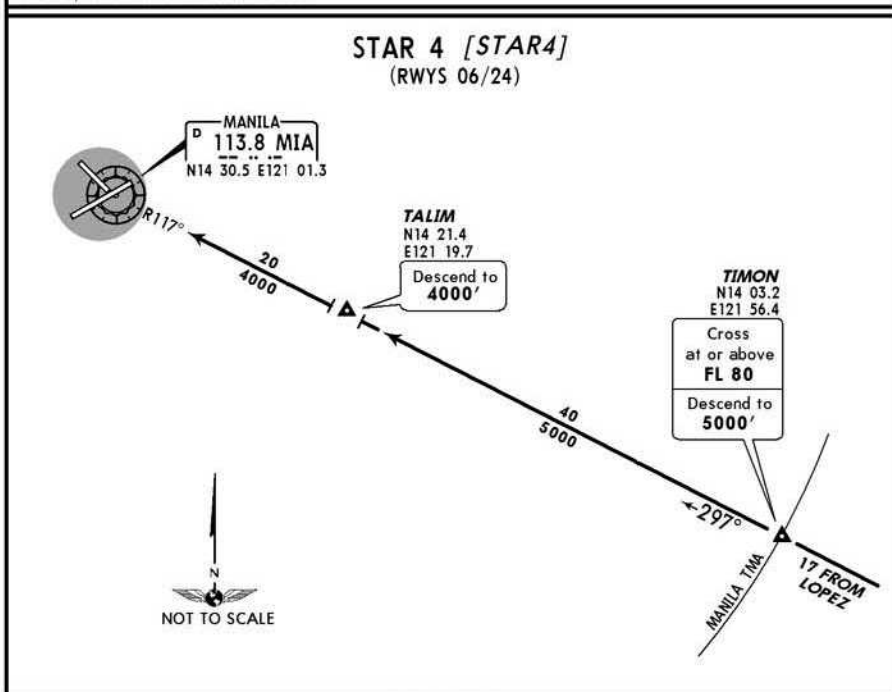
#### ROUTING

At JOM, track in on the MIA R-081.



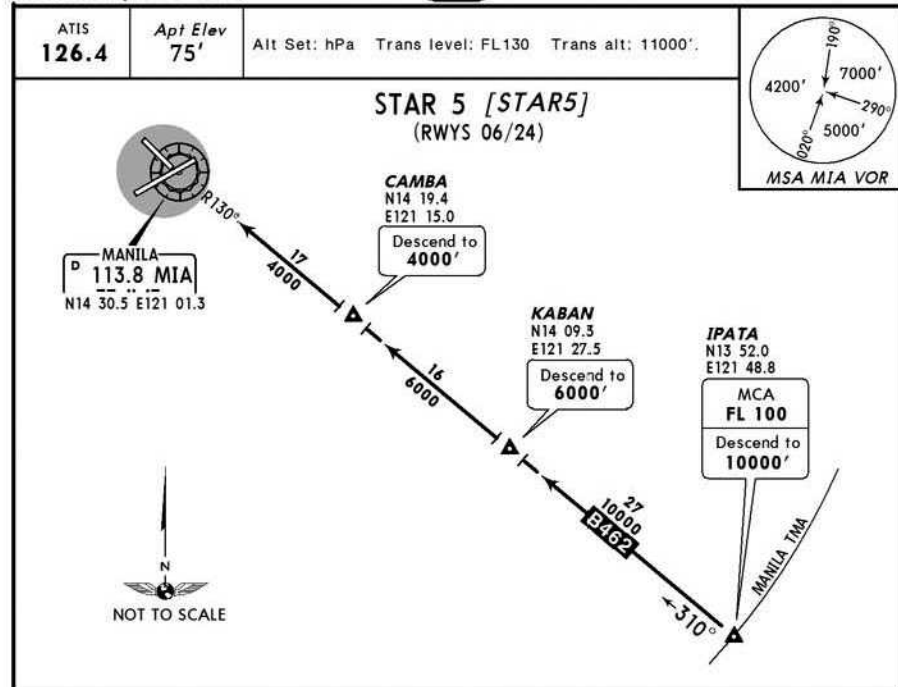
ROUTING

At AL, track in on the MIA R-108.



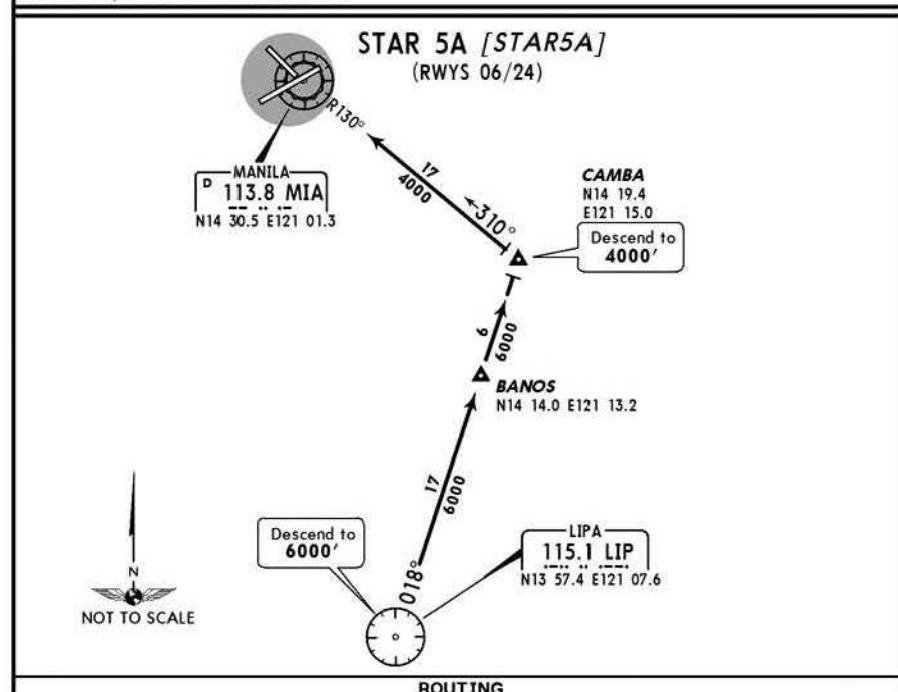
ROUTING

At TIMON, track in on the MIA R-117.



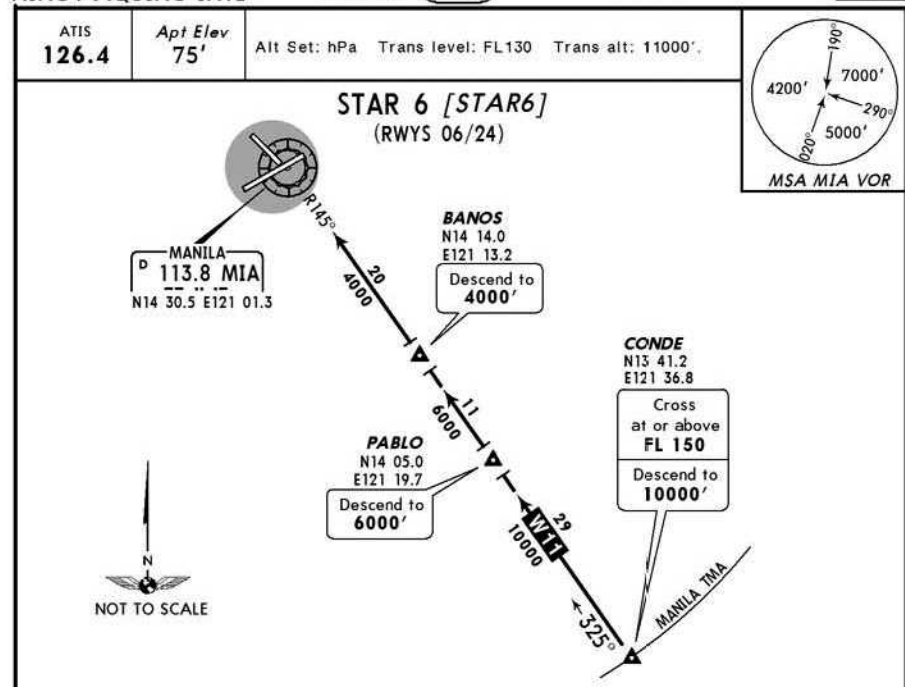
ROUTING

At IPATA, track in on the MIA R-130.



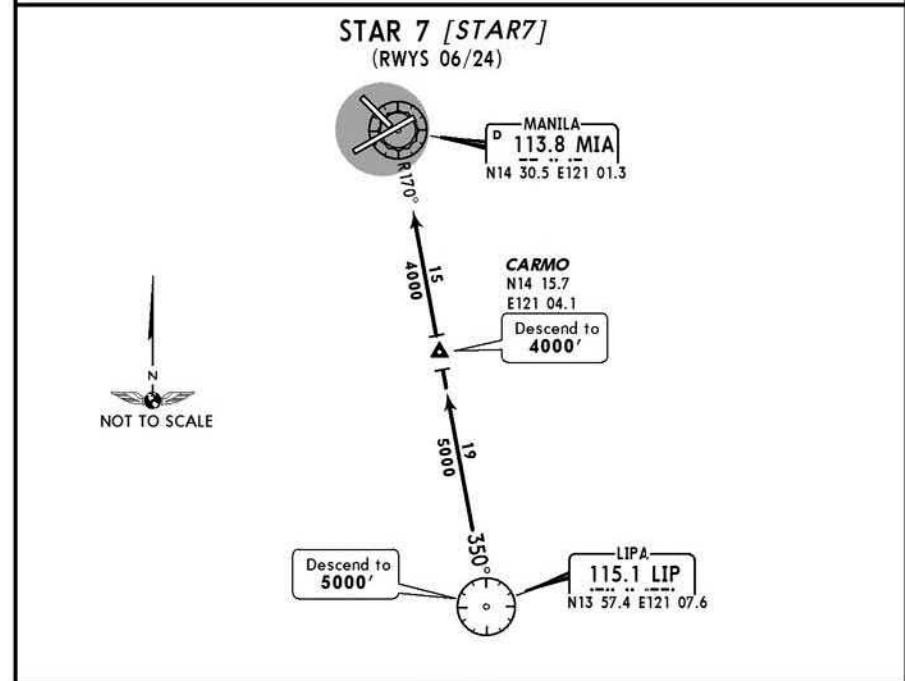
ROUTING

At LIP, track out on the LIP R-018 to CAMBA via BANOS. At CAMBA, track in on the MIA R-130.



ROUTING

At CONDE, track in on the MIA R-145.

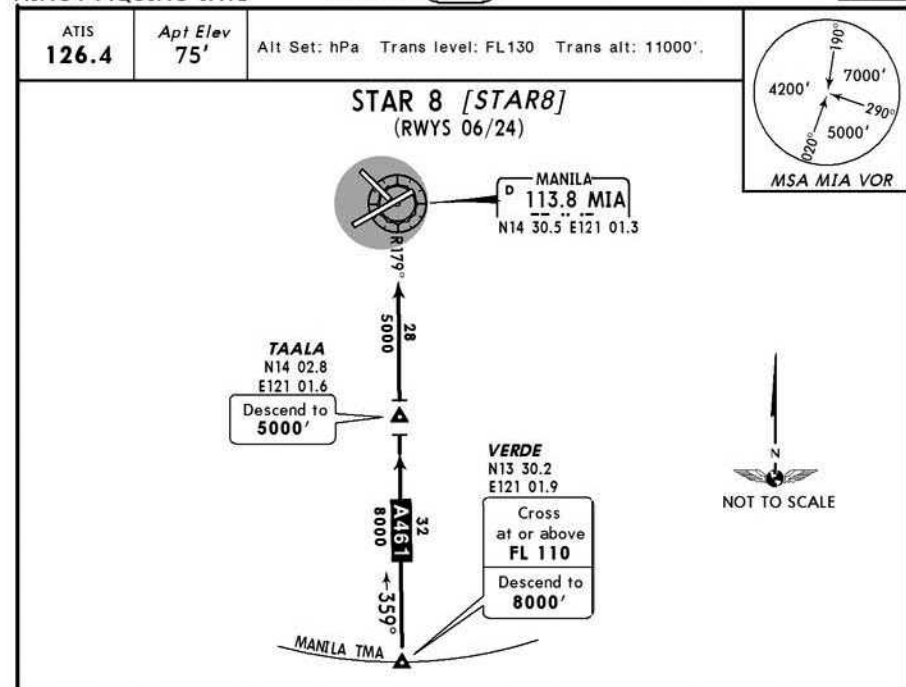


ROUTING

At LIP, track in on the MIA R-170 to CARMO.

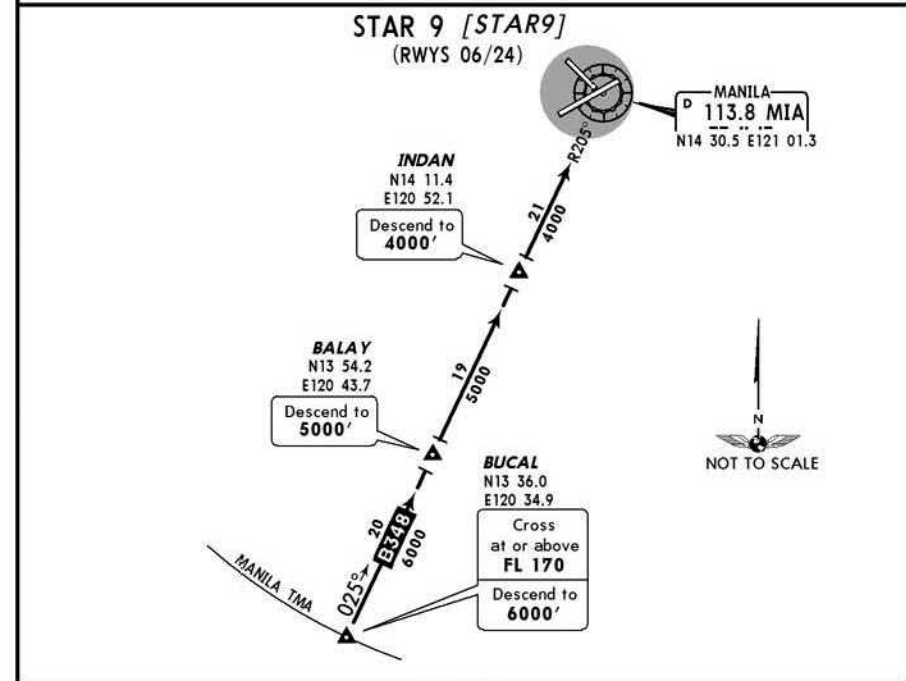
CHANGES: Coordinates.

FOR FLIGHTSIM USE ONLY



ROUTING

At VERDE, track in on the MIA R-179.



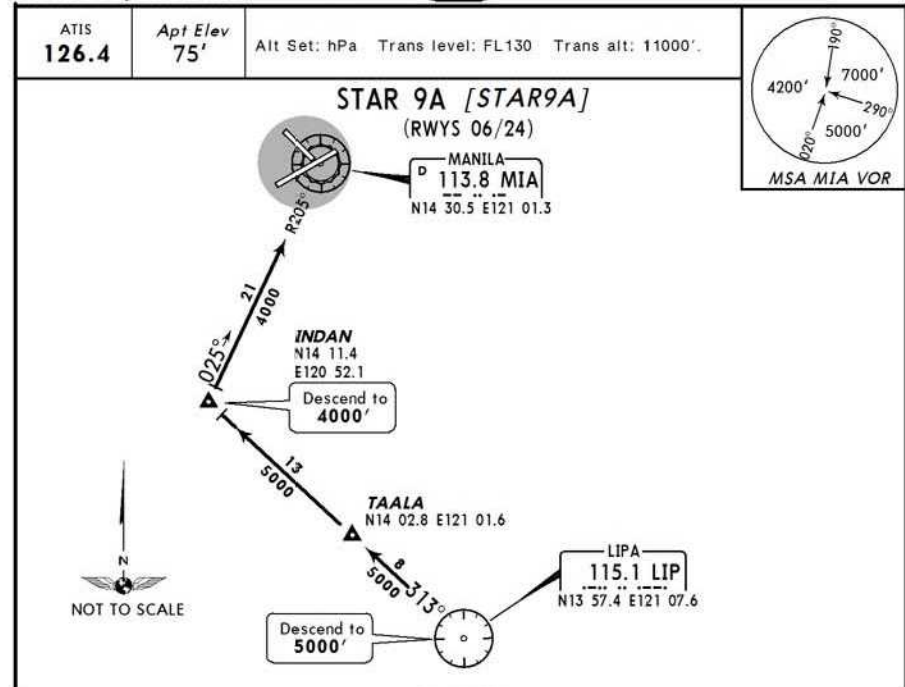
ROUTING

At BUCAL, track in on the MIA R-205.

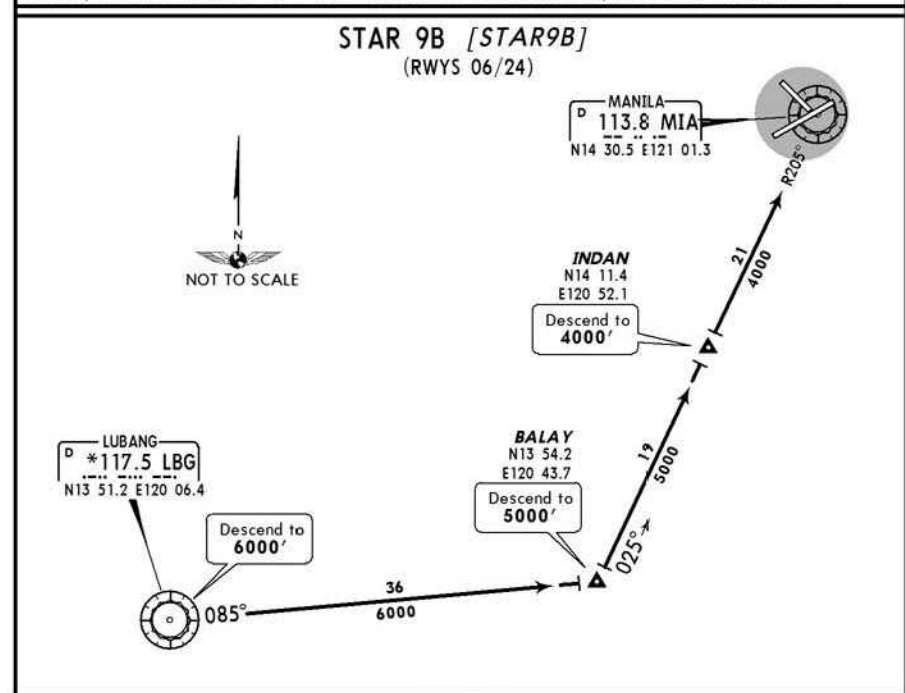
CHANGES: Coordinates.

FOR FLIGHTSIM USE ONLY

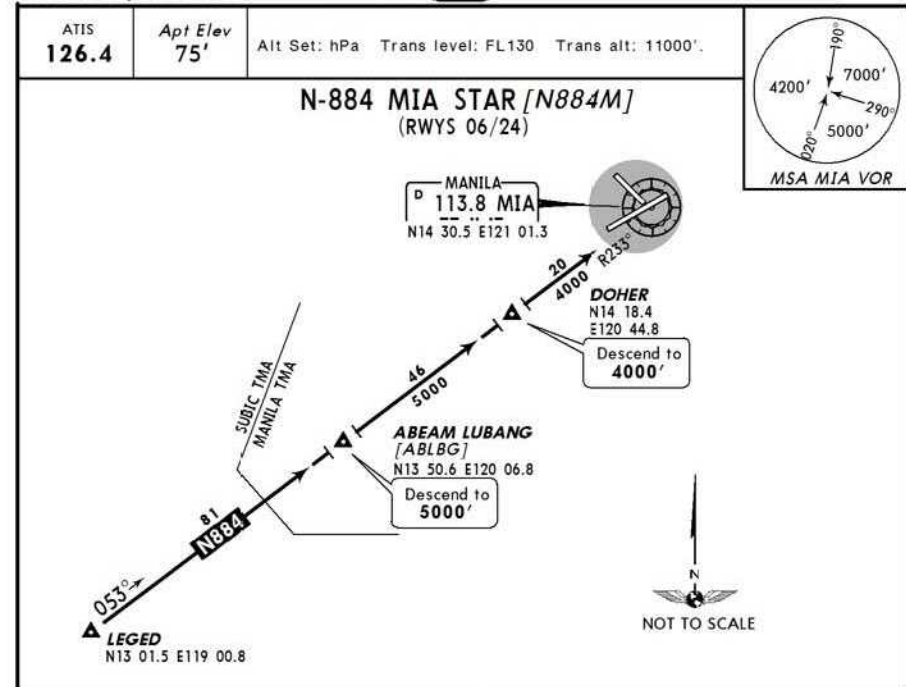




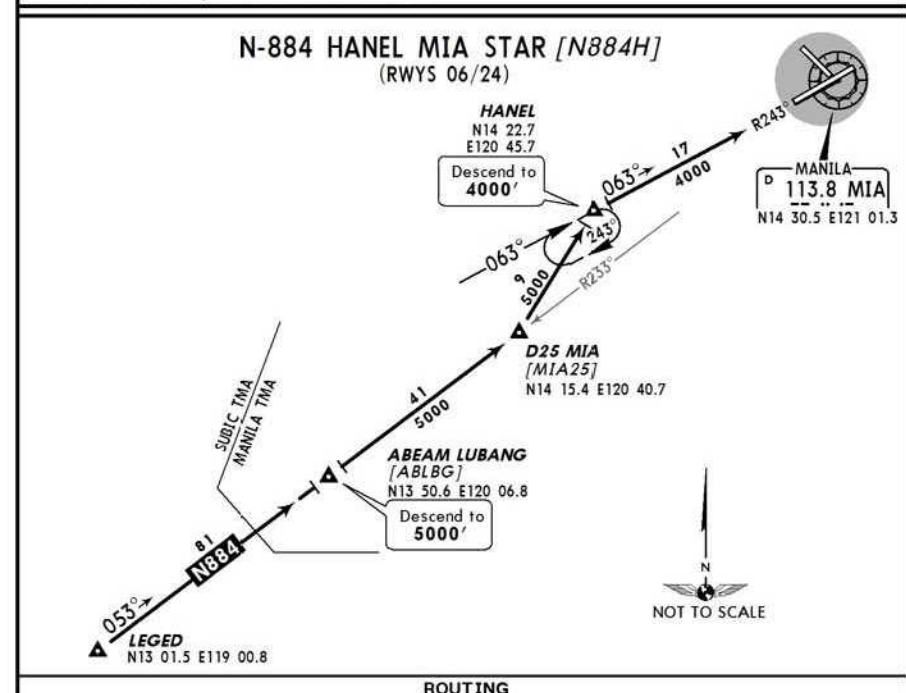
**ROUTING**  
At LIP, track out on the LIP R-313 to INDAN via TAALA. At INDAN, track in on the MIA R-205.



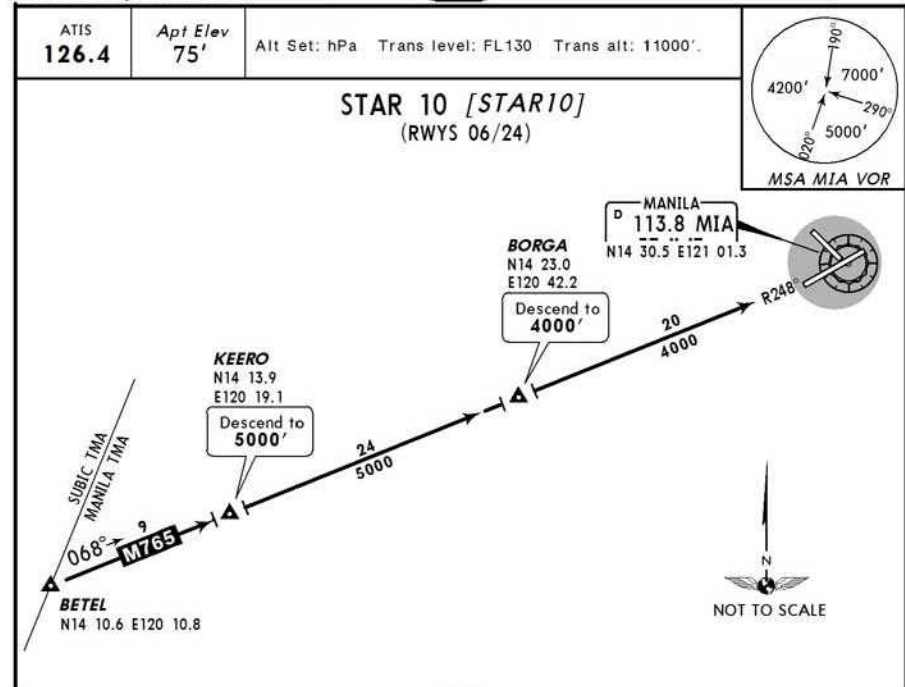
**ROUTING**  
At LBG, track out on the LBG R-085 to BALAY. At BALAY, track in on the MIA R-205.



**ROUTING**  
At ABEAM LUBANG, track in on the MIA R-233.

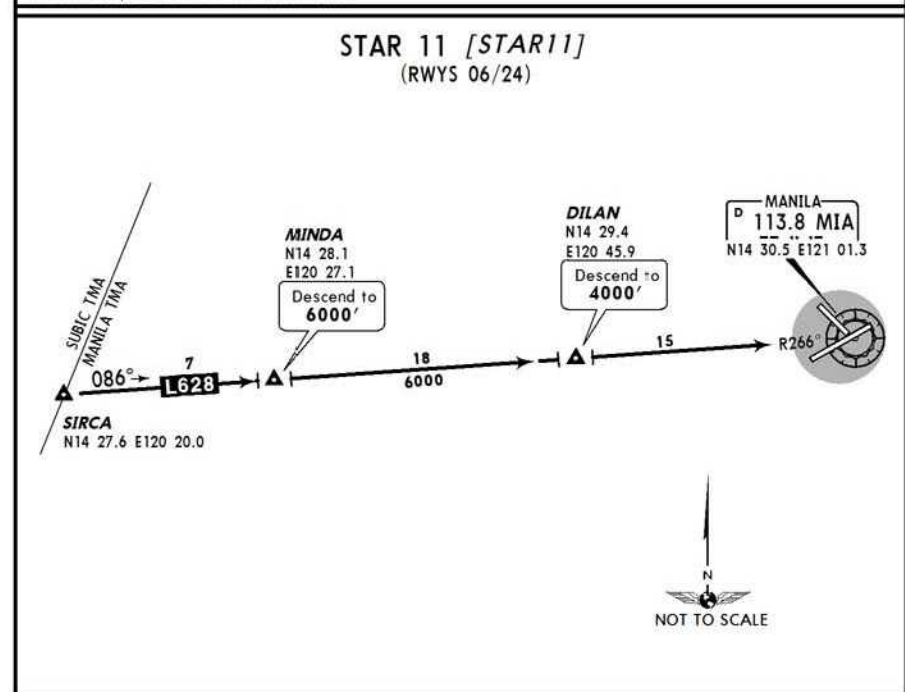


**ROUTING**  
At ABEAM LUBANG track in on the MIA R-233. At D25 MIA, proceed to HANEL and track in on the MIA R-243.



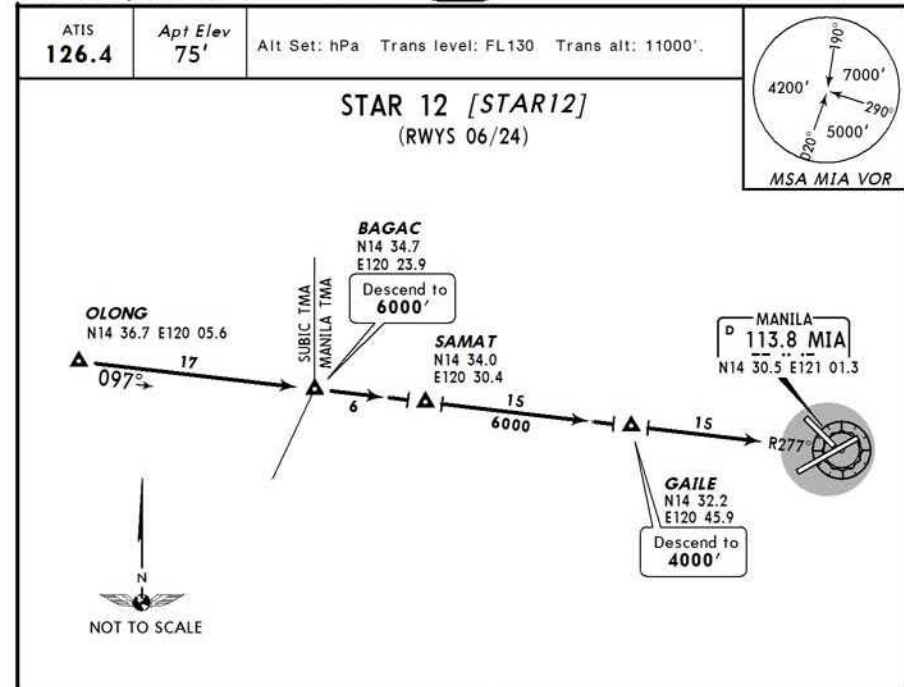
**ROUTING**

At KEERO, track in on the MIA R-248.



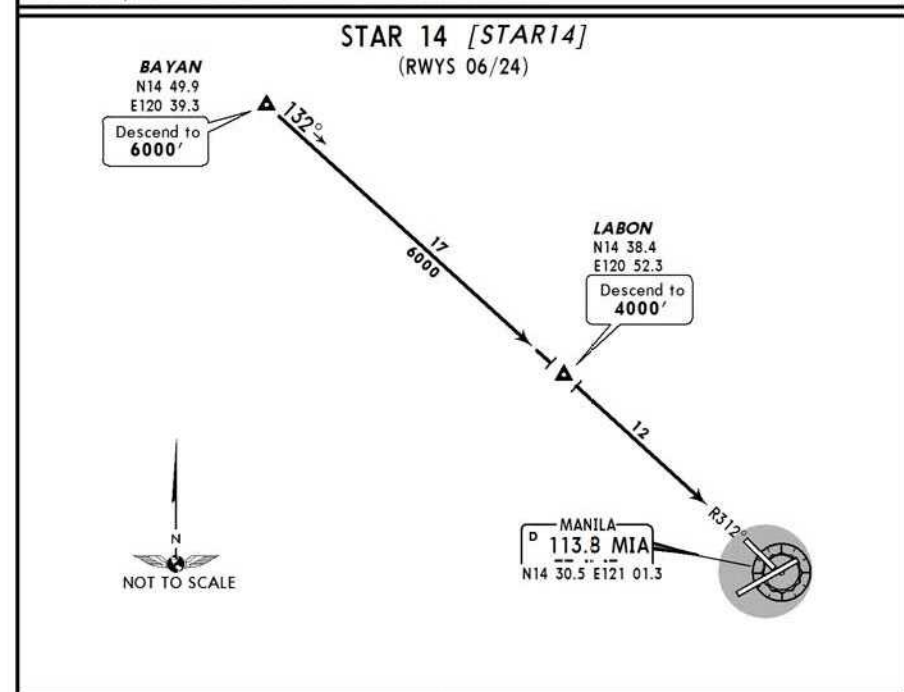
**ROUTING**

At MINDA, track in on the MIA R-266.



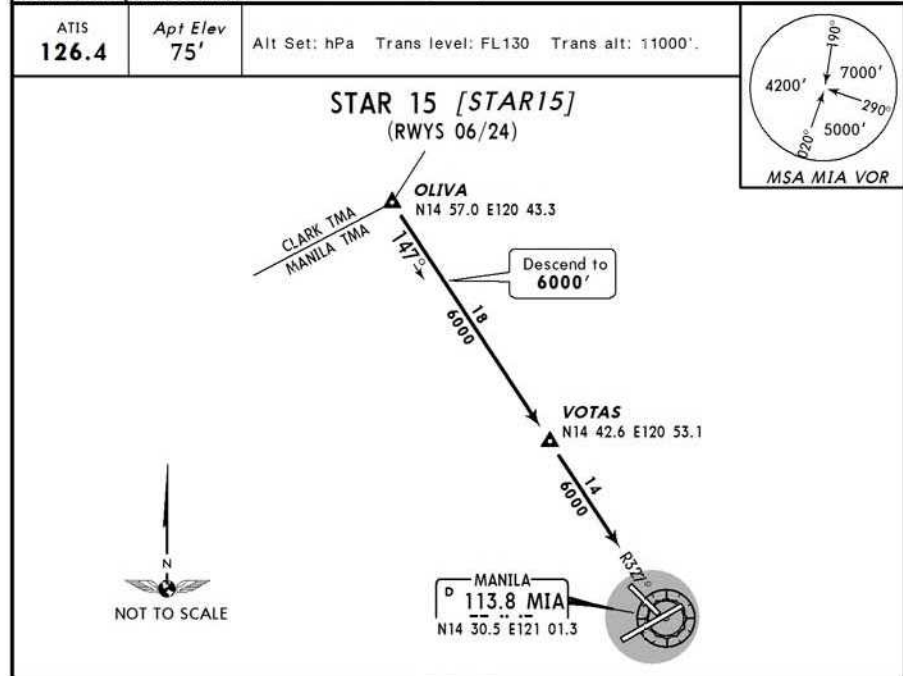
**ROUTING**

At BAGAC, track in on the MIA R-277 to GAILE via SAMAT.



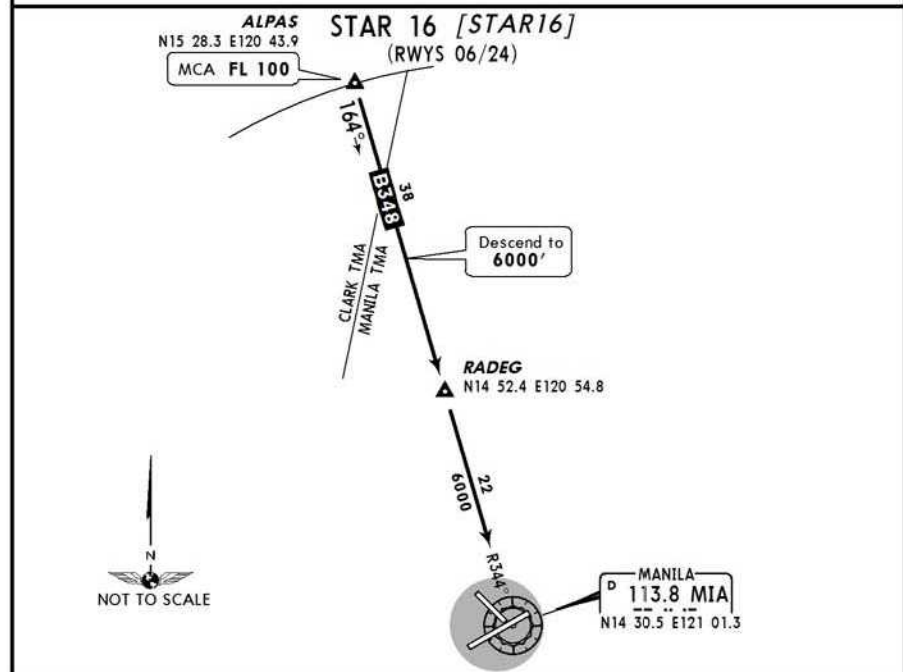
**ROUTING**

At BAYAN, track in on the MIA R-312.



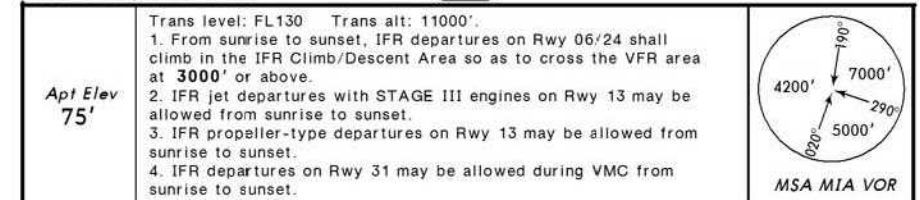
**ROUTING**

At OLIVA, track in on the MIA R-327 and descend to **6000'** to MIA via VOTAS.

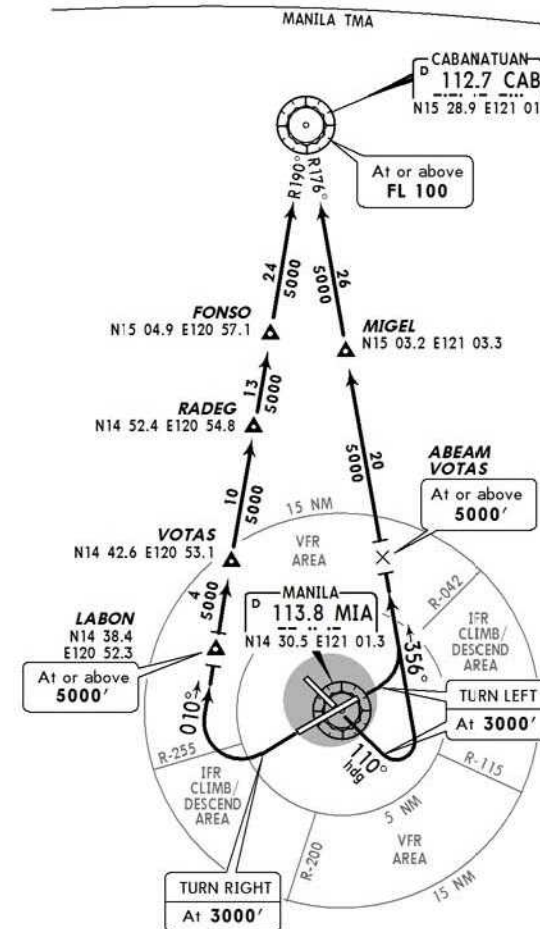


**ROUTING**

At ALPAS, track in on the MIA R-344 and descend to **6000'** to MIA via RADEG.



**SID 1**  
**CABANATUAN DEPARTURE [SID1]**  
(RWYS 06, 13 & 24)

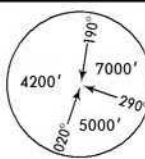


RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then LEFT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then LEFT climbing turn.
24	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
RWY	ROUTING
06 & 13	Intercept and track-in on CAB R-176 to ABEAM VOTAS. Continue climb to CAB via MIGEL.
24	Intercept and track-in on CAB R-190 to LABON. Continue climb to CAB via VOTAS, RADEG and FONSO.



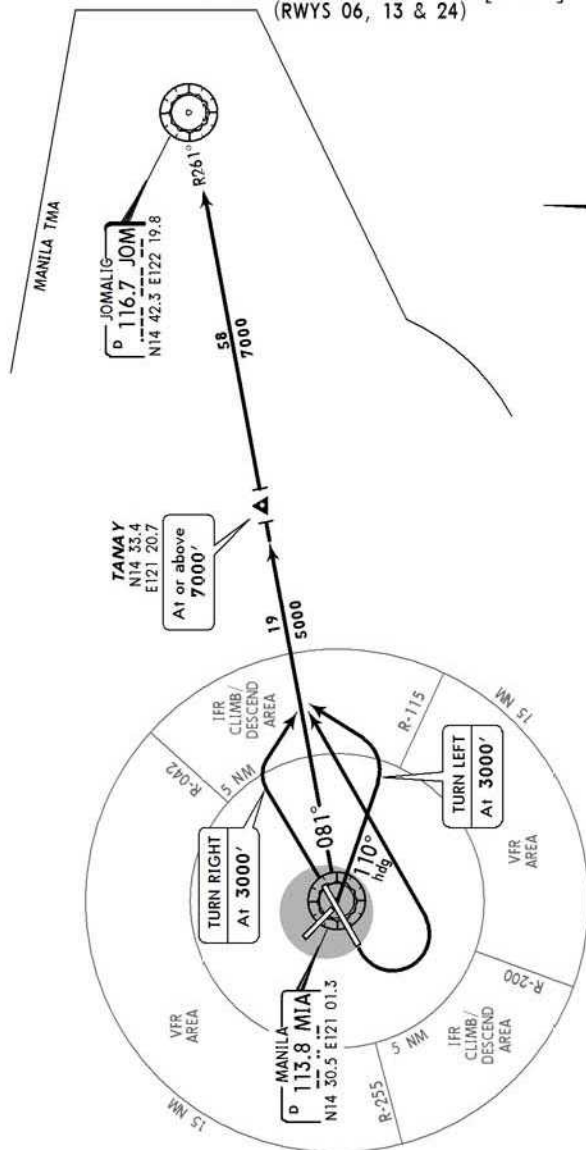
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'.  
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.  
2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.  
3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.  
4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



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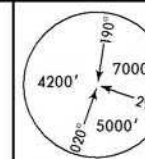
## SID 2 JOMALIG DEPARTURE [SID2] (RWYS 06, 13 & 24)



RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then LEFT climbing turn.
24	180° turn to the LEFT within 5 NM.
ROUTING	
Intercept and track-out on MIA R-081 to TANAY. Continue climb to JOM.	

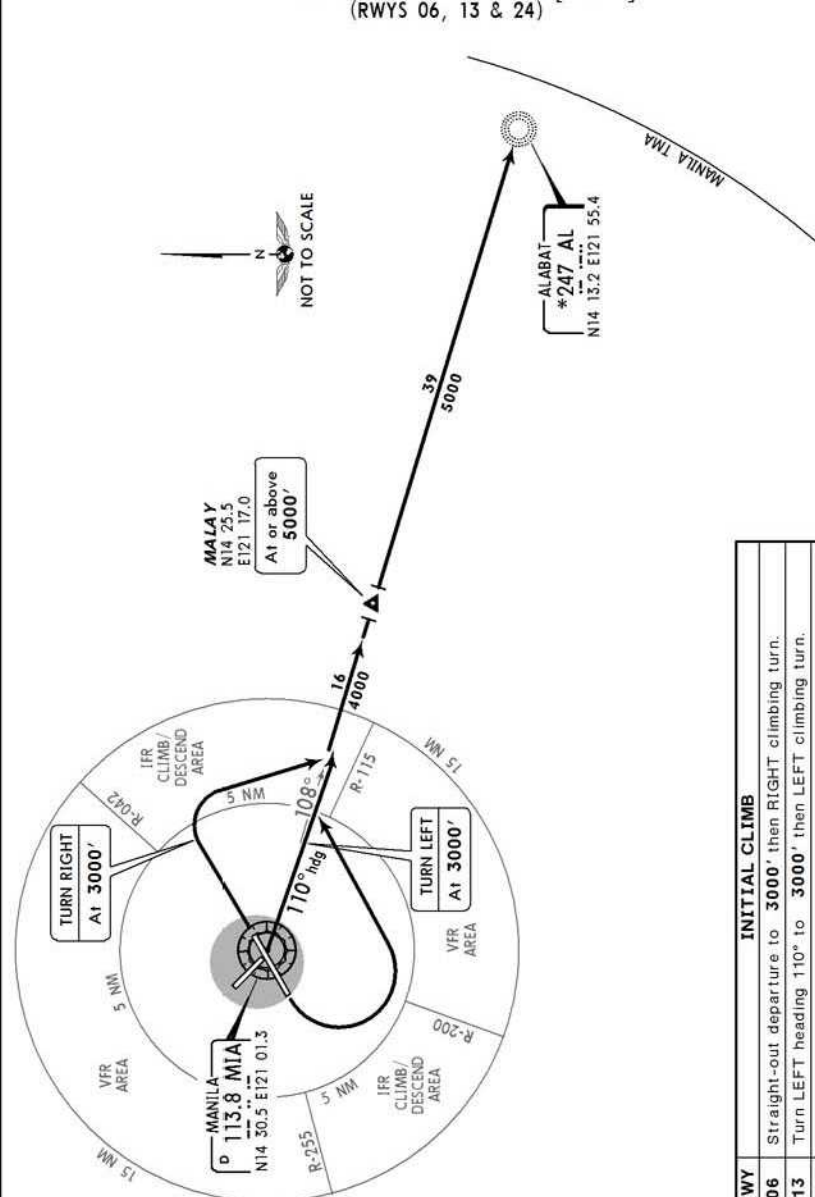
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'.  
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.  
2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.  
3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.  
4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



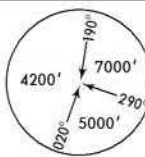
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## SID 3 ALABAT DEPARTURE [SID3] (RWYS 06, 13 & 24)



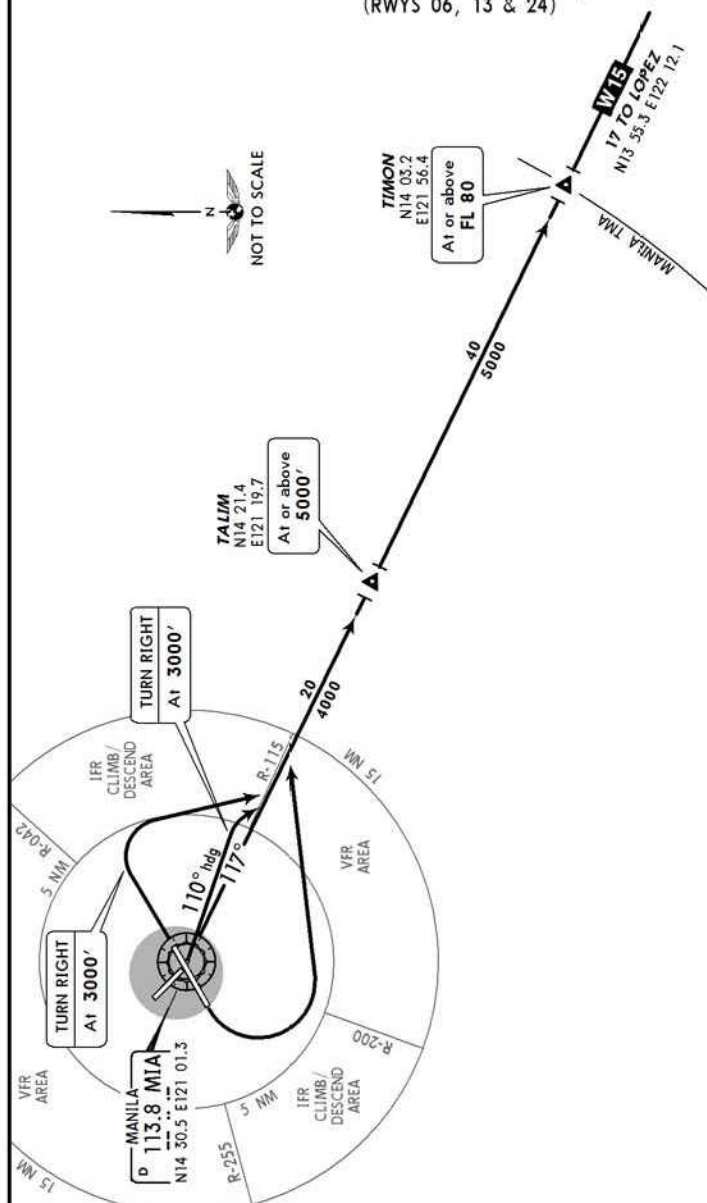
RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then LEFT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-108 to MALAY. Continue climb to AL.	

Trans level: FL130    Trans alt: 11000'.  
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.  
2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.  
3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.  
4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



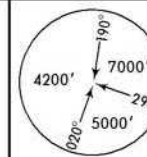
MSA MIA VOR

## SID 4



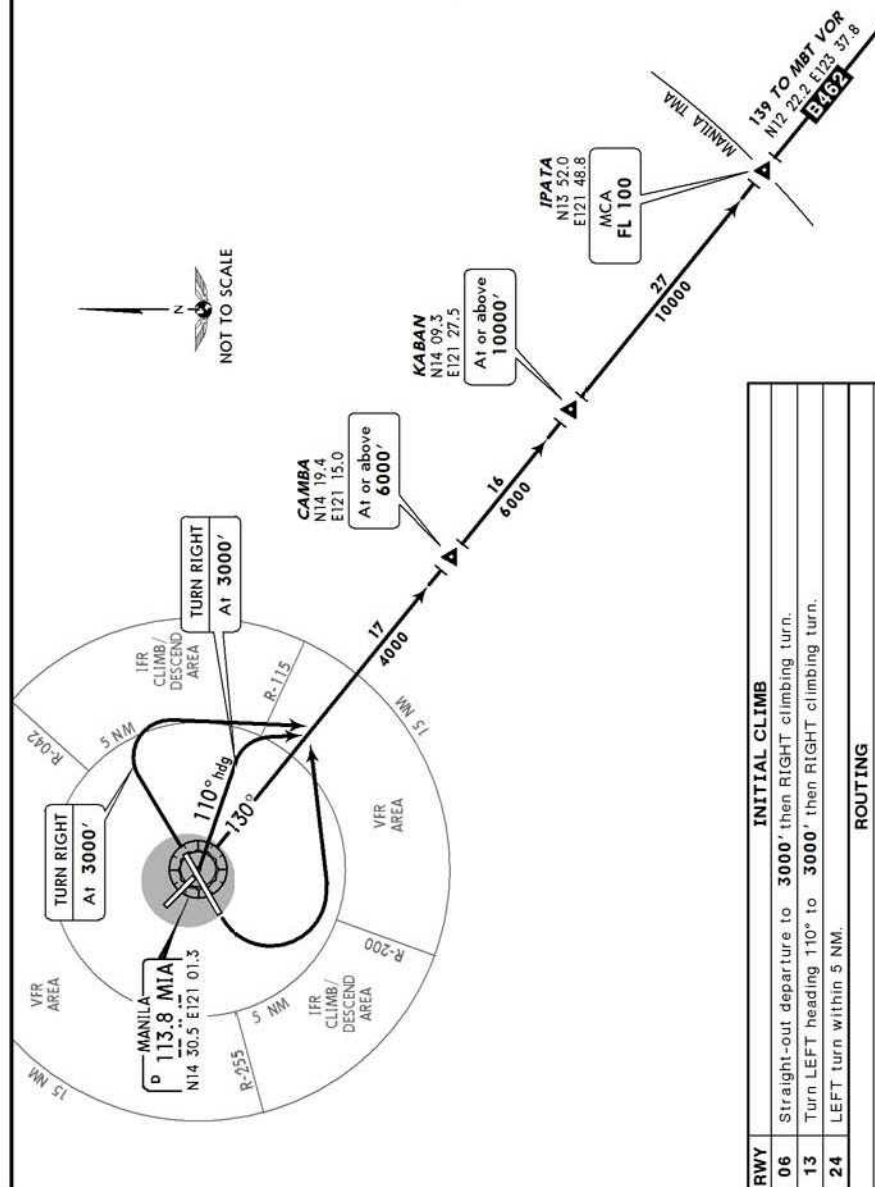
IRWY	INITIAL CLIMB
06	Straight-out departure to 3000' then RIGHT climbing turn.
13	Turn LEFT heading 110° to 3000' then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-117 to TALIM. Continue climb to TIMON.	

Trans level: FL130    Trans alt: 11000'.  
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.  
2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.  
3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.  
4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



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## SID 5



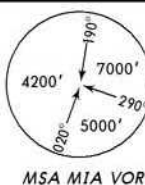
RWY	INITIAL CLIMB
06	Straight-out departure to 3000' then RIGHT climbing turn.
13	Turn LEFT heading 110° to 3000' then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-130 to GAMB. Continue climb to IPATA via KABAN.	



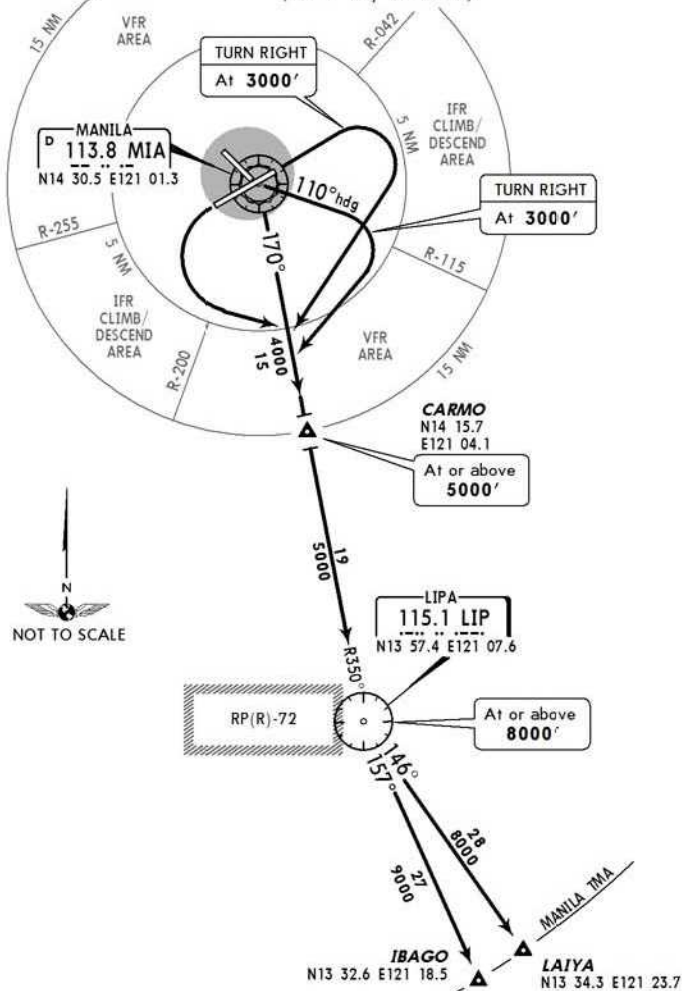


Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'.  
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.  
2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.  
3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.  
4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



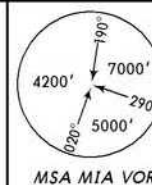
### SID 7 LIPA 2 DEPARTURE [SID7] (RWYS 06, 13 & 24)



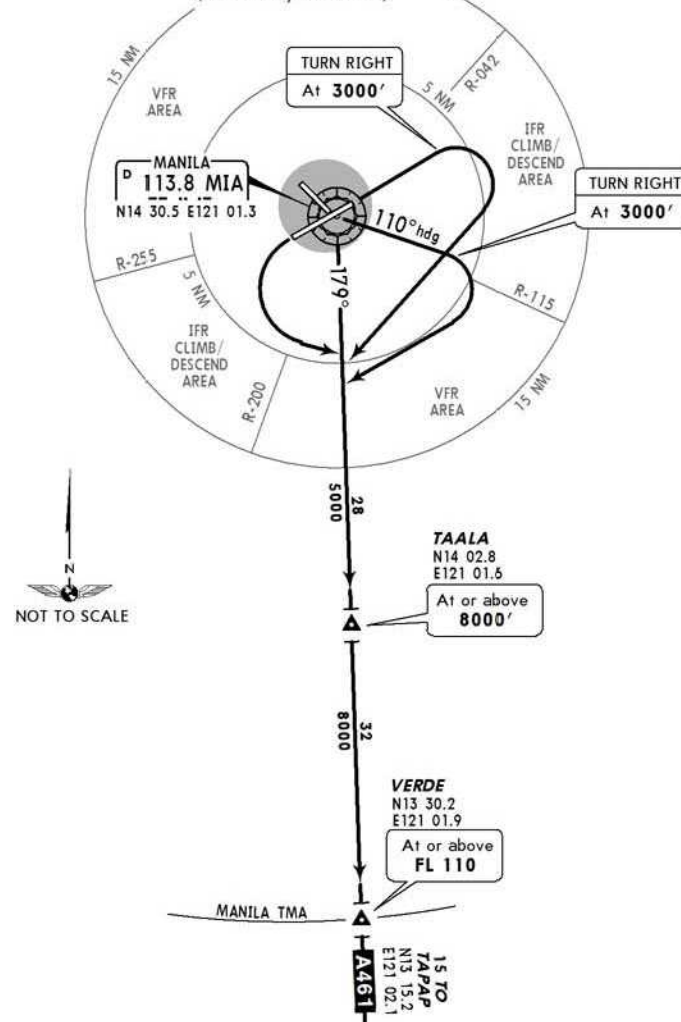
RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-170 to CARMO. Continue climb to LIP. Crossing restriction at LIP may be increased by ATC subject to RP(R)-72 activities.	

Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'.  
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.  
2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.  
3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.  
4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.

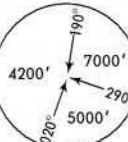


### SID 8 A-461 TAPAP DEPARTURE [SID8] (RWYS 06, 13 & 24)

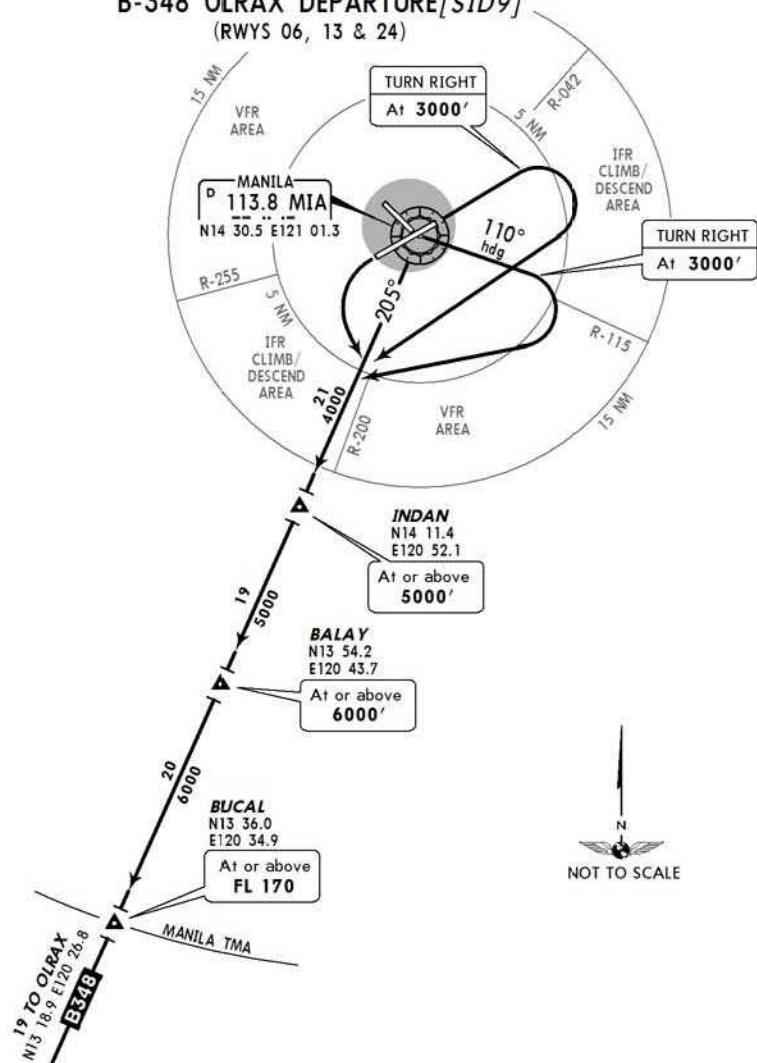


RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-179 to TAALA. Continue climb to VERDE.	

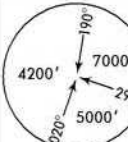


<p>Apt Elev 75'</p>	<p>Trans level: FL130 Trans alt: 11000'. 1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at <b>3000'</b> or above. 2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset. 3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset. 4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.</p>	 <p>MSA MIA VOR</p>
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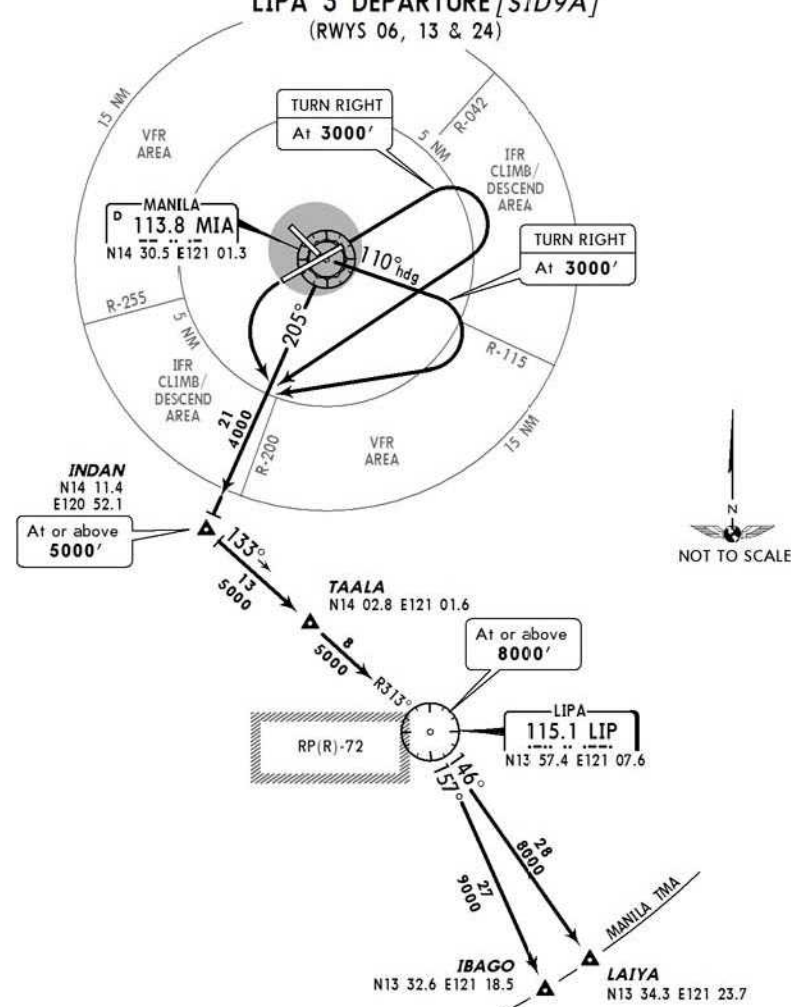
**SID 9**  
**B-348 OLRAX DEPARTURE [SID9]**  
(RWYS 06, 13 & 24)



RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-205 to INDAN. Continue climb to BUCAL via BALAY.	

<p>Apt Elev 75'</p>	<p>Trans level: FL130 Trans alt: 11000'. 1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at <b>3000'</b> or above. 2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset. 3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset. 4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.</p>	 <p>MSA MIA VOR</p>
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**SID 9A**  
**LIPA 3 DEPARTURE [SID9A]**  
(RWYS 06, 13 & 24)

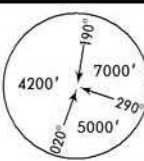


RWY	INITIAL CLIMB
06	Straight-out departure to <b>3000'</b> then RIGHT climbing turn.
13	Turn LEFT heading 110° to <b>3000'</b> then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-205 to INDAN. Turn LEFT to intercept and track-in on LIP R-313. Crossing restriction at LIP may be increased by ATC subject to RP(R)-72 activities.	



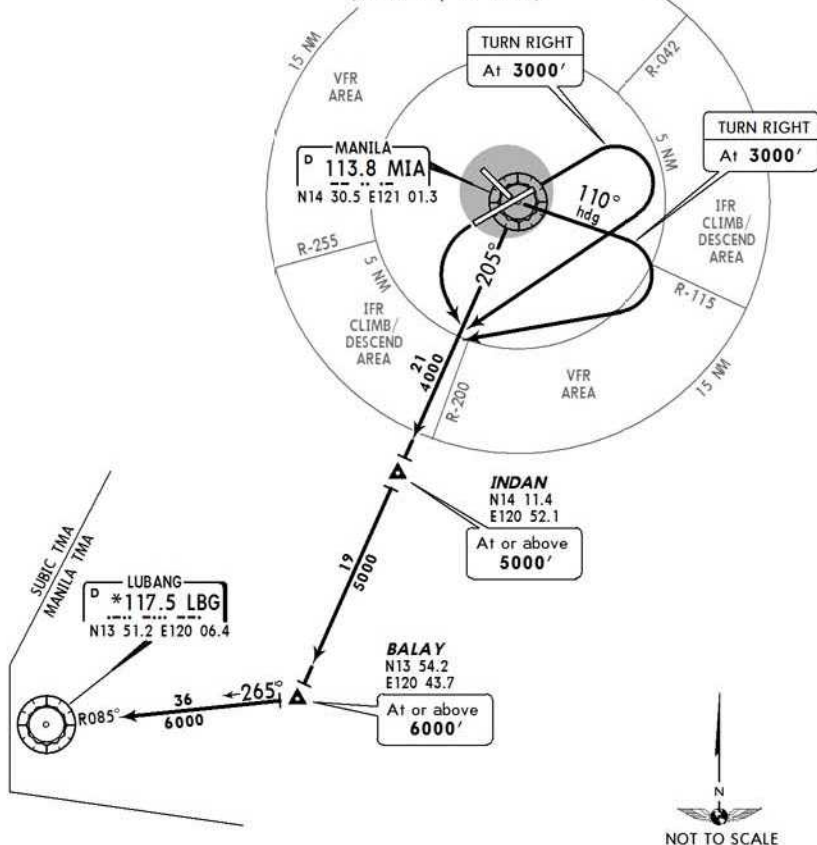
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at 3000' or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

**SID 9B**  
**LUBANG DEPARTURE [SID9B]**  
(RWYS 06, 13 & 24)

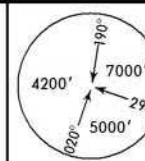


NOT TO SCALE

RWY	INITIAL CLIMB
06	Straight-out departure to 3000' then RIGHT climbing turn.
13	Turn LEFT heading 110° to 3000' then RIGHT climbing turn.
24	LEFT turn within 5 NM.
ROUTING	
Intercept and track-out on MIA R-205 to INDAN. Continue climb to BALAY. At BALAY turn RIGHT to intercept and track-in on LBG R-085.	

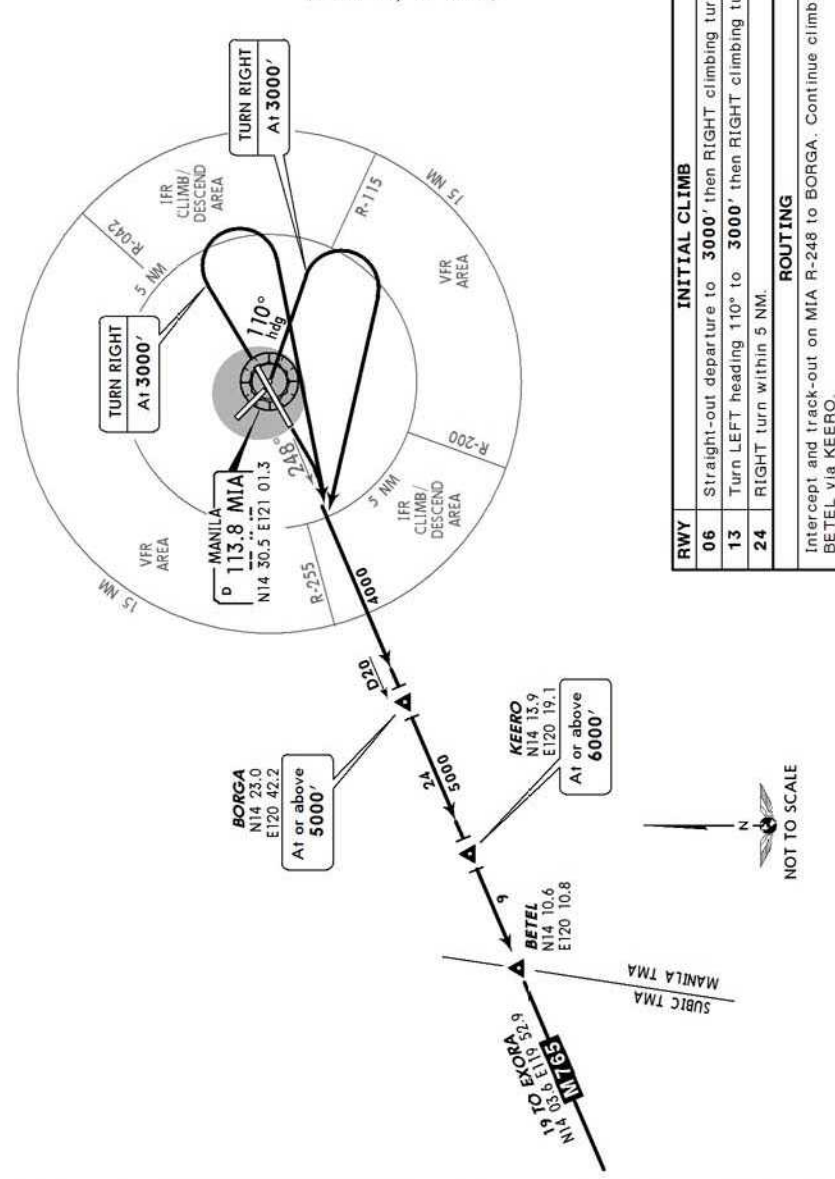
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at 3000' or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

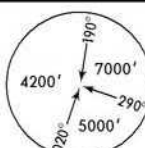
**SID 10**  
**M-765 EXORA DEPARTURE [SID10]**  
(RWYS 06, 13 & 24)



NOT TO SCALE

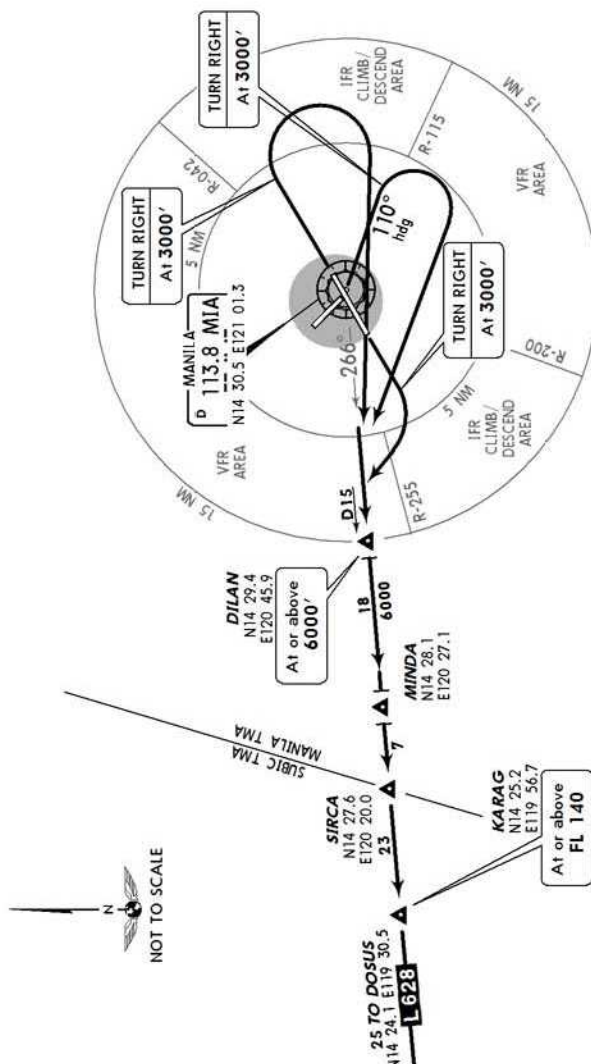
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

**SID 11**  
**L-628 DOSUS DEPARTURE [SID11]**  
(RWYS 06, 13 & 24)



**INITIAL CLIMB**

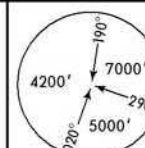
- | RWY | 06   | 13   | 24   |
|-----|--|--|--|
| 06  | Straight-out departure to <b>3000'</b> then RIGHT climbing turn. |  |  |
| 13  |  | Turn LEFT heading 110° to <b>3000'</b> then RIGHT climbing turn. |  |
| 24  |  |  | Straight-out departure to <b>3000'</b> then RIGHT climbing turn. |

**ROUTING**

Intercept and track-out on MIA R-266 to DILAN. Continue climb to KARAG via MINDA and SIRCA.

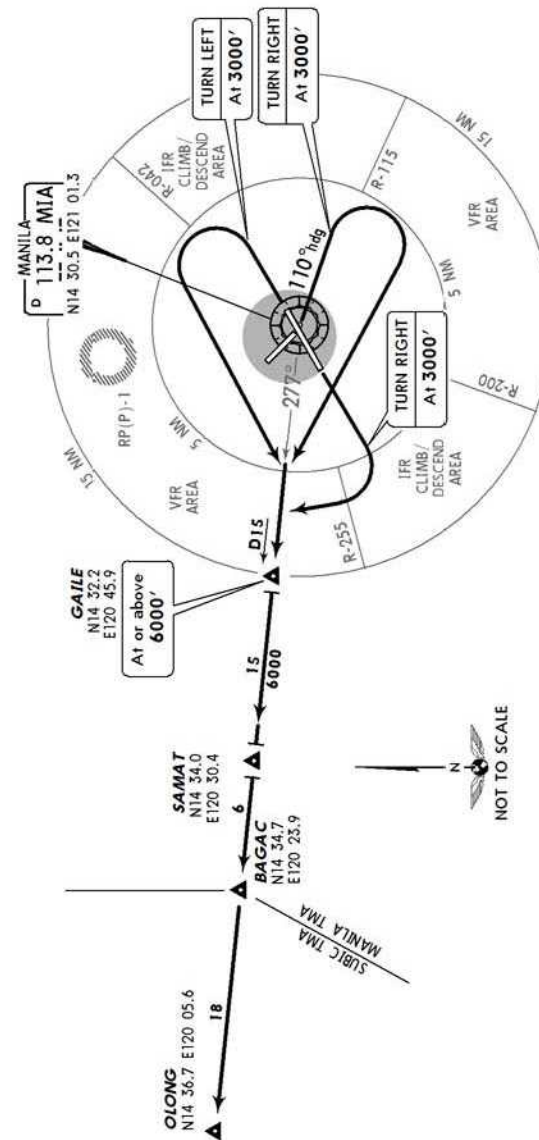
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at **3000'** or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

**SID 12**  
**SUBIC 1 DEPARTURE [SID12]**  
(RWYS 06, 13 & 24)



**INITIAL CLIMB**

- | RWY | 06   | 13   | 24   |
|-----|--|--|--|
| 06  | Straight-out departure to <b>3000'</b> then LEFT climbing turn avoiding RP(P)-1. |  |  |
| 13  |  | Turn LEFT heading 110° to <b>3000'</b> then RIGHT climbing turn. |  |
| 24  |  |  | Straight-out departure to <b>3000'</b> then RIGHT climbing turn. |

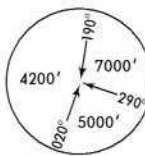
**ROUTING**

Intercept and track-outbound on MIA R-277 to GAILE. Continue climb to OLONG via SAMAT and BAGAC.



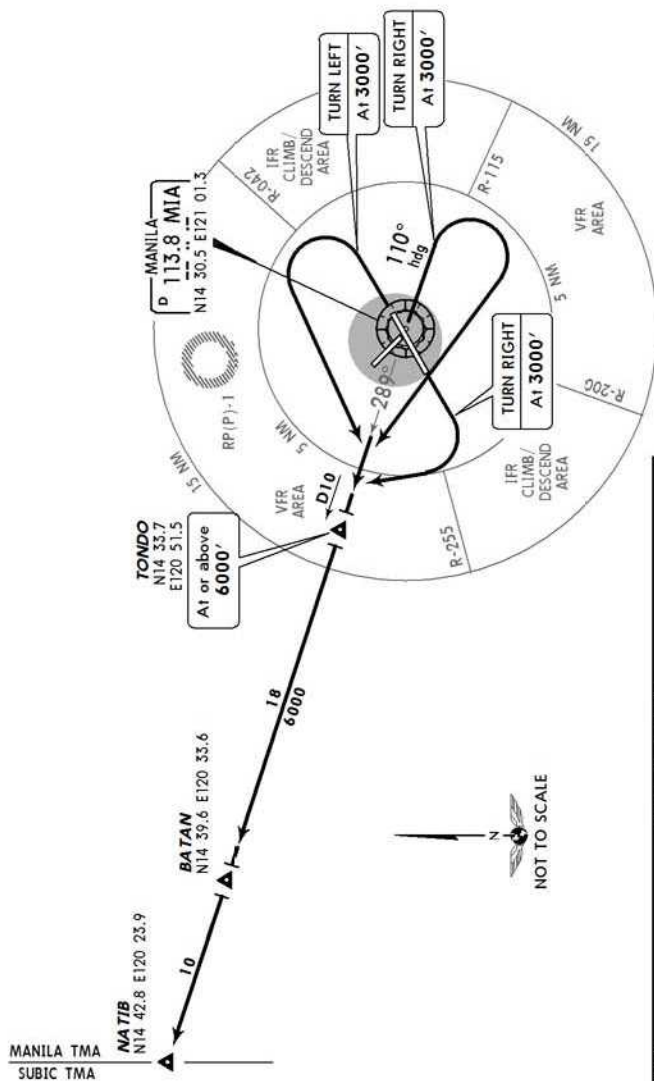
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at 3000' or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

**SID 13**  
**SUBIC 2 DEPARTURE [SID13]**  
(RWYS 06, 13 & 24)



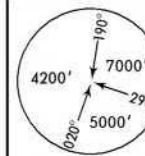
RWY	INITIAL CLIMB
06	Straight-out departure to 3000' then LEFT climbing turn avoiding RP(P)-1.
13	Turn LEFT heading 110° to 3000' then RIGHT climbing turn.
24	Straight-out departure to 3000' then RIGHT climbing turn.

**ROUTING**

Intercept and track-out on MIA R-289 to TONDO. Continue climb to NATIB via BATAN.

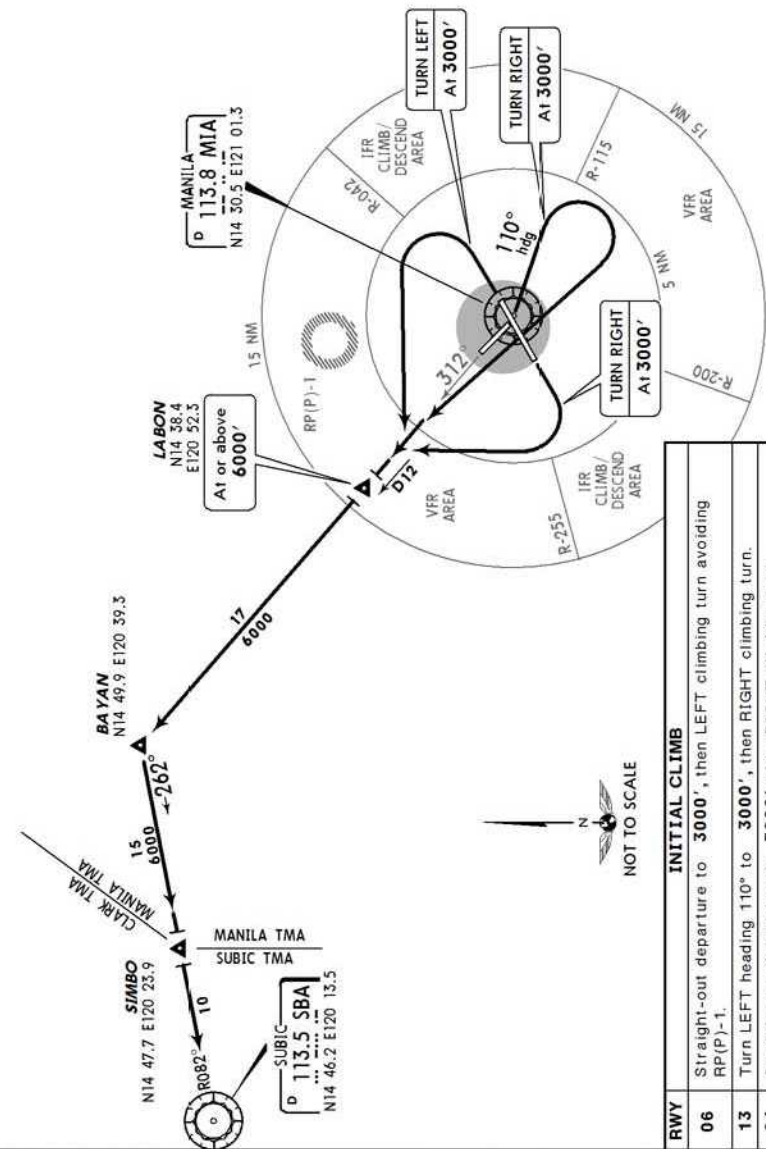
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at 3000' or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

**SID 14**  
**SUBIC 3 DEPARTURE [SID14]**  
(RWYS 06, 13 & 24)



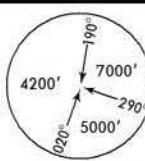
RWY	INITIAL CLIMB
06	Straight-out departure to 3000', then LEFT climbing turn avoiding RP(P)-1.
13	Turn LEFT heading 110° to 3000', then RIGHT climbing turn.
24	Straight-out departure to 3000', then RIGHT climbing turn.

**ROUTING**

Intercept and track-out on MIA R-312 to LABON. Continue climb to BAYAN. At BAYAN, turn LEFT to intercept and track-in on SBA R-082 to SIMBO.

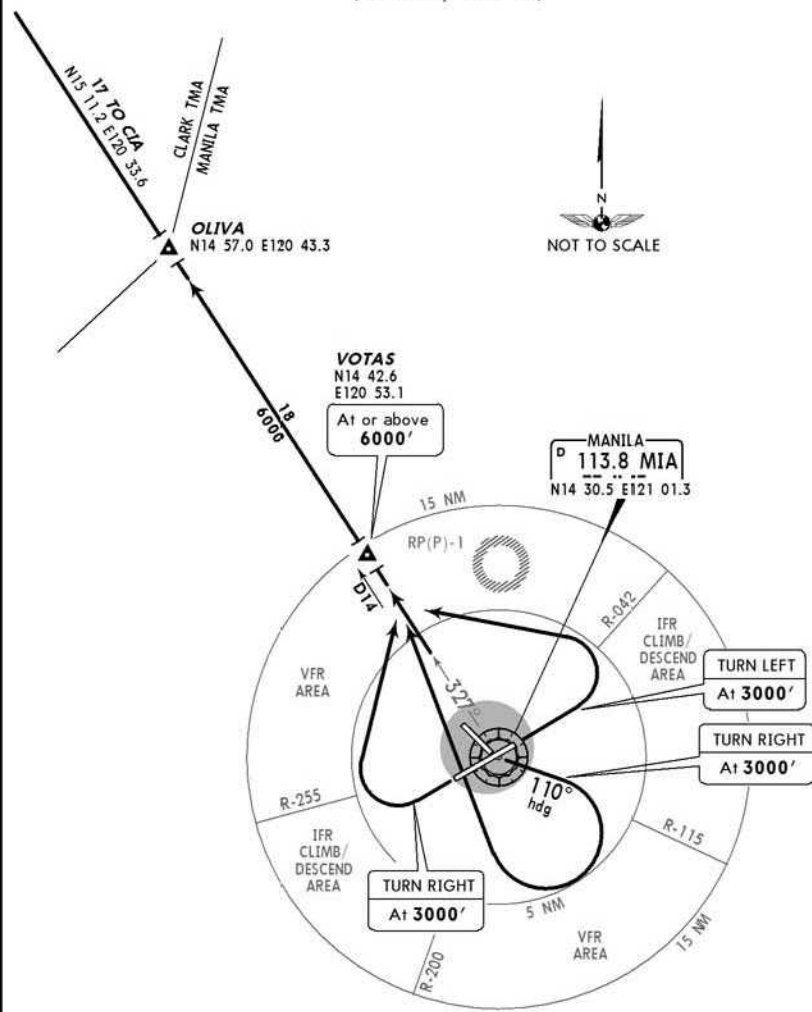
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at 3000' or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

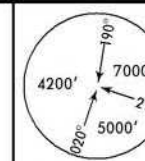
**SID 15**  
**CLARK DEPARTURE [SID15]**  
(RWYS 06, 13 & 24)



RWY	INITIAL CLIMB
06	Straight-out departure to 3000' then LEFT climbing turn avoiding RP(P)-1.
13	Turn LEFT heading 110° to 3000' then RIGHT climbing turn.
24	Straight-out departure to 3000' then RIGHT climbing turn.
ROUTING	
Intercept and track-out on MIA R-327 to VOTAS. Continue climb to OLIVA.	

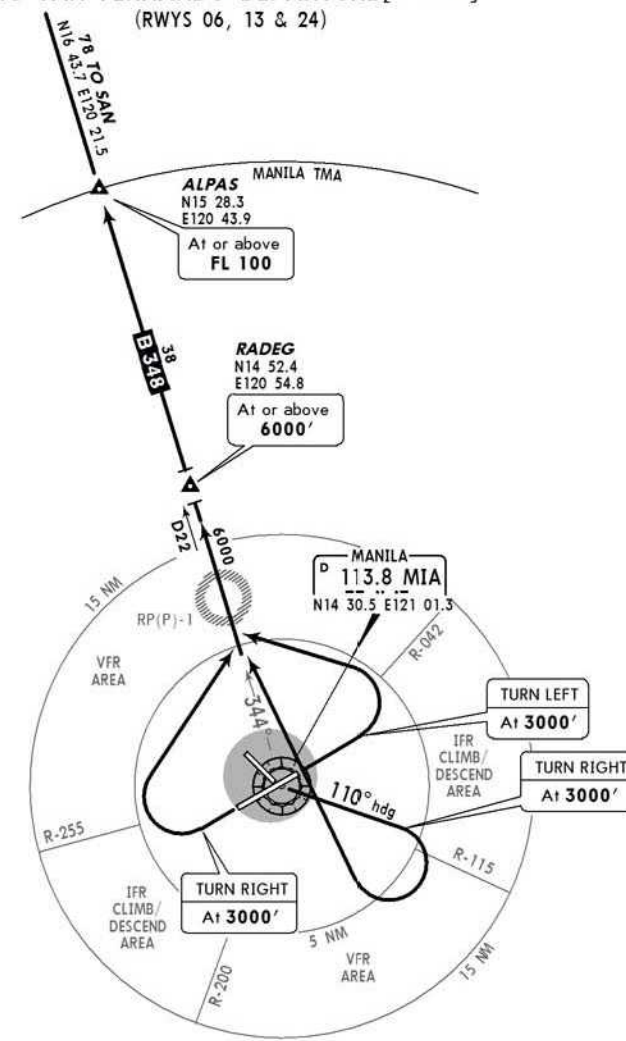
Apt Elev  
75'

- Trans level: FL130 Trans alt: 11000'
1. From sunrise to sunset, IFR departures on Rwy 06/24 shall climb in the IFR Climb/Descent Area so as to cross the VFR area at 3000' or above.
  2. IFR jet departures with STAGE III engines on Rwy 13 may be allowed from sunrise to sunset.
  3. IFR propeller-type departures on Rwy 13 may be allowed from sunrise to sunset.
  4. IFR departures on Rwy 31 may be allowed during VMC from sunrise to sunset.



MSA MIA VOR

**SID 16**  
**B-348 SAN FERNANDO DEPARTURE [SID16]**  
(RWYS 06, 13 & 24)



RWY	INITIAL CLIMB
06	Straight-out departure to 3000' then LEFT climbing turn avoiding RP(P)-1.
13	Turn LEFT heading 110° to 3000' then RIGHT climbing turn.
24	Straight-out departure to 3000' then RIGHT climbing turn.
ROUTING	
Intercept and track-out on MIA R-344 to RADEG. Continue climb to ALPAS.	



## NOISE ABATEMENT PROCEDURES

Local Time minus 8 HOURS = UTC

Noise abatement procedures are applicable to all aircraft operating at the Ninoy Aquino International Airport.

## DEPARTURE PROCEDURES FOR ALL RUNWAYS EXCEPT RWY 13

- For jet aircraft, a speed of  $V_2$  plus 10 knots shall be maintained up to 3000 ft AGL after take-off, after which acceleration to flap retraction may be commenced. Climb thrust shall be selected at 1500 ft AGL.
- All other (non-jet) aircraft shall attempt to attain 3000 ft AGL as soon as practicable consistent with safe operational practices for subject aircraft climb performance.
- In all the above cases, SID procedures shall be tracked as published.
- The above procedures shall be terminated and standard climb out procedures implemented immediately should any event affecting climb performance occur (i.e., problem with or loss of engine power).

## MODIFIED NOISE ABATEMENT PROCEDURES FOR RWY 13 DEPARTURE (SOUTH BOUND)

- After takeoff make a left climbing turn before the end of Rwy 13 (max 15 deg bank angle) heading 100 degrees.
- For jet aircraft, a speed of  $V_2$  plus 10 knots shall be maintained to 3,000 ft AGL after takeoff after which flap retraction may be commenced. Climb thrust shall be selected at 1,500 ft.
- In all cases, SID procedures shall be tracked as published.
- The above procedures shall be terminated and standard climb-out procedures shall be implemented immediately should any event affecting climb performance occur (i.e., problem with loss of power).

## ARRIVAL PROCEDURES

**Rwy 06 or 24 landings:** Observe published aerodrome traffic circuit, altitudes/speeds.

*NOTE: IFR aircraft from the North and landing on Rwy 24 shall be radar vectored to the RIGHT base leg at or above 2000 ft.*

## RUNWAY 13/31 OPERATIONS

Takeoff and landing on Rwy 13/31 of A330 and lower category aircraft is allowed based on the following limitations:

- Takeoff/landing on Rwy 13/31 for day visual operations only;
- All arrivals and departures must comply with the existing noise abatement procedures.

Takeoffs on Rwy 31 shall not be commenced from Twy F-1 and F-1B.

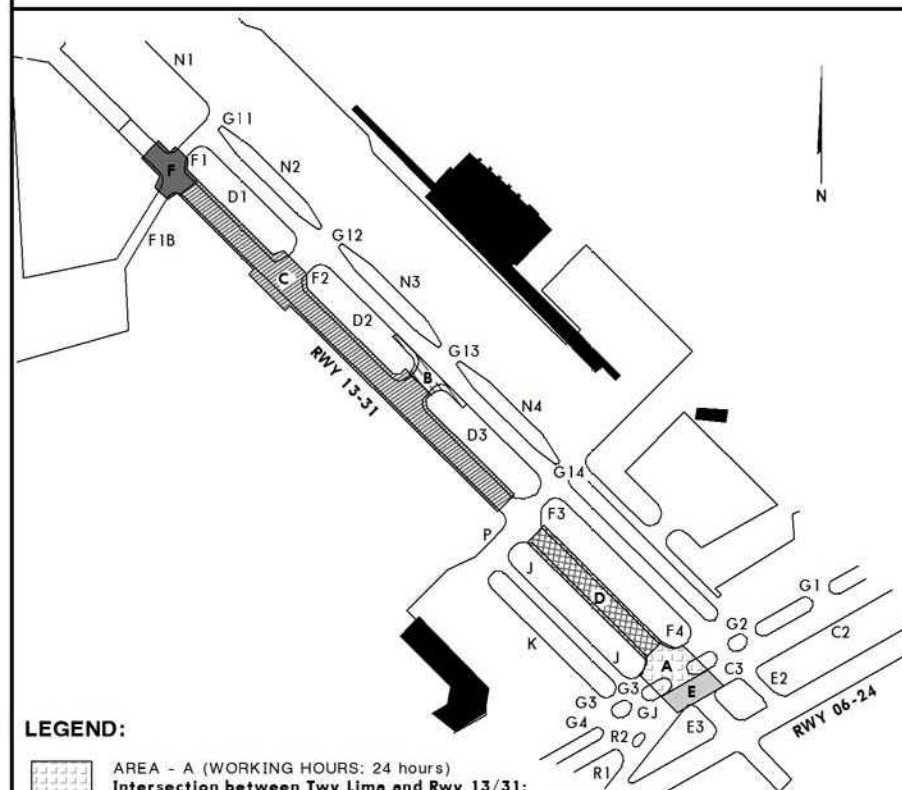
Aircraft not exceeding 5682kg (12,526 lbs.) shall confine takeoffs and landings on Rwy 13/31 unless the following conditions exist:

- Wind velocity is more than 5 knots or wind direction is not favorable.
- Poor visibility or adverse weather.
- Presence of obstruction or hazard.

For purposes of noise abatement, only hushkitted B737-200 & DC-9 (Stage-2) ACFT are allowed to takeoff Rwy 13 from sunrise to sunset & for non-hushkitted ACFT, takeoff shall be on Rwy 06/24.

## RUNWAY 13/31 AND NEW TAXIWAY-F3 CONSTRUCTION PLAN

From Jun 01, 2005 to Jan 31, 2006



## LEGEND:

- AREA - A (WORKING HOURS: 24 hours)**  
**Intersection between Twy Lima and Rwy 13/31:**  
Effective Jun 1, 2005 0000 UTC to Jul 31, 2005 2359 UTC.  
1. 49.7m southwest of Twy L and Twy D intersection.  
2. 40.0m northwest of Twy C3 centerline.  
3. 65.9m northeast of Twy J and Twy L intersection.
- AREA - B (WORKING HOURS: 1500 UTC-2000 UTC daily)**  
**Transition of new Twy F3 and Twy D:**  
Effective Jun 1, 2005 1500 UTC to Aug 21, 2005 2000 UTC.  
1. 11.7m southwest of Twy D and Twy D2 centerline.
- AREA - C (WORKING HOURS: 24 hours)**  
**Runway 13/31 segments B2-B5:**  
Effective Oct 1, 2005 0000 UTC to Jan 31, 2006 2359 UTC.  
1. 47.7m southwest of Twy D and Twy F2 intersection.  
2. 62.5m southeast of Rwy 13/31 and F1 intersection.
- AREA - D (WORKING HOURS: 24 hours)**  
**Runway 13/31 segments B6-B7:**  
Effective Jun 1, 2005 0000 UTC to Jul 31, 2005 2359 UTC.  
1. 58.5m northwest of Rwy 13/31 and Twy F4 intersection.  
2. 70.8m northwest of Rwy 13/31 and Twy L intersection.
- AREA - E (WORKING HOURS: 1600 UTC-2000 UTC daily)**  
**Intersection between Twy Charlie and Rwy 13/31:**  
Effective Aug 1, 2005 1600 UTC to Sep 30, 2005 2000 UTC.  
1. 70.2m northeast of G3 centerline.  
2. 49.6m southwest of G2 centerline.
- AREA - F (WORKING HOURS: 24 hours)**  
**Intersection between Rwy 13/31 and Twy F1:**  
Effective Oct 1, 2005 0000 UTC to Dec 15, 2005 2359 UTC.  
1. 47.7m southwest of Twy D and Twy F intersection.

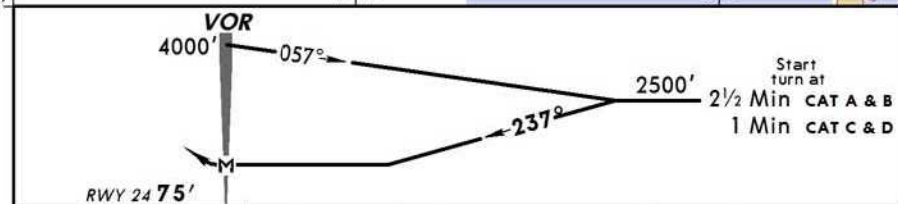
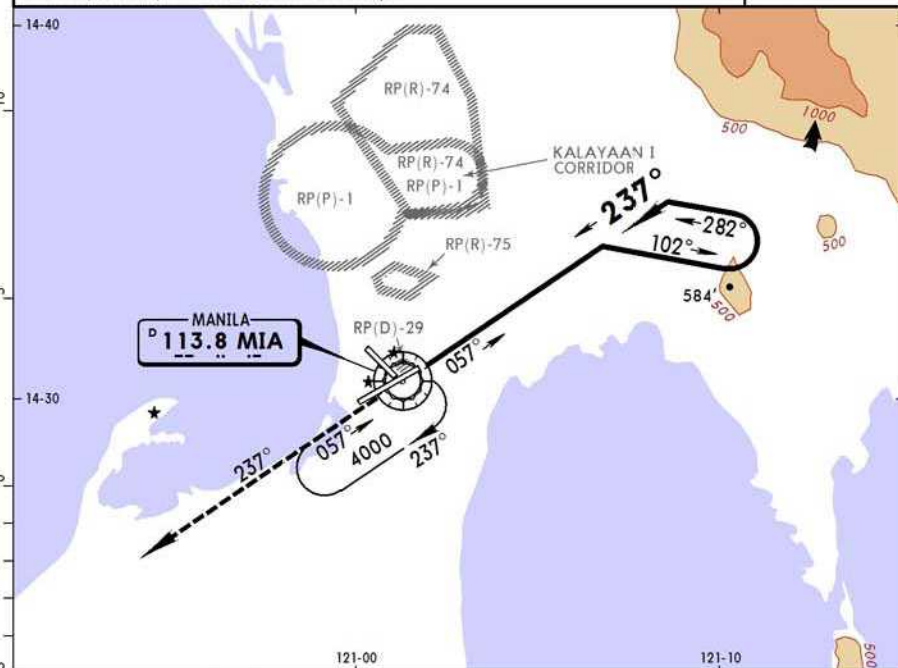


ATIS	MANILA Approach (R)	MANILA Tower	Ground
126.4	119.7	118.1	121.9
VOR MIA 113.8	Final Apch Crs 237°	No FAF	MDA(H) 560' (485') Apt Elev 75' RWY 24 75'

MISSED APCH: Climb to MIA VOR R-237 or heading 237° to 4000'. Return to MIA VOR or as instructed by ATC.

Alt Set: hPa Rwy Elev: 3 hPa Trans level: FL 130 Trans alt: 11000'  
1. Based on TAS 140 kts (still air) for Cat A & B aircraft only and based on TAS of 225 kts (still air) for Cat C & D aircraft only.

MSA MIA VOR



SSALF	4000'	MIA
PAPI PAPI	↑	on 113.8
MAP at VOR		R-237

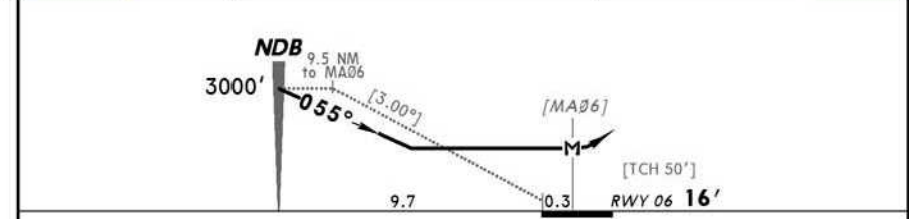
STRAIGHT-IN LANDING RWY 24			CIRCLE-TO-LAND		
MDA(H) 560' (485')			Not Authorized North of the Field Between Rwy 13 & 24		
	ALS out	Max Kts		MDA(H)	
A	1.6 km	100		560' (485') - 1.9 km	
B		135		580' (505') - 2.8 km	
C	2.0 km	180		680' (605') - 3.7 km	
D	2.4 km	205		780' (705') - 4.6 km	

ATIS	MANILA Approach (R)	MANILA Tower	Ground
126.4	119.7	118.1	121.9
NDB RS 285	Final Apch Crs 055°	No FAF	MDA(H) 860' (844') Apt Elev 75' RWY 06 16'

MISSED APCH: Climb on 055° heading to 1000' within 5.0 NM, RIGHT climbing turn to 145° to 3000' within 10 NM. Return to RS NDB, or as instructed by ATC.

Alt Set: hPa Rwy Elev: 1 hPa Trans level: FL 130 Trans alt: 11000'

MSA MIA VOR



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
NDB to MAP	10.0	8:34	6:40	6:00	5:00	4:17

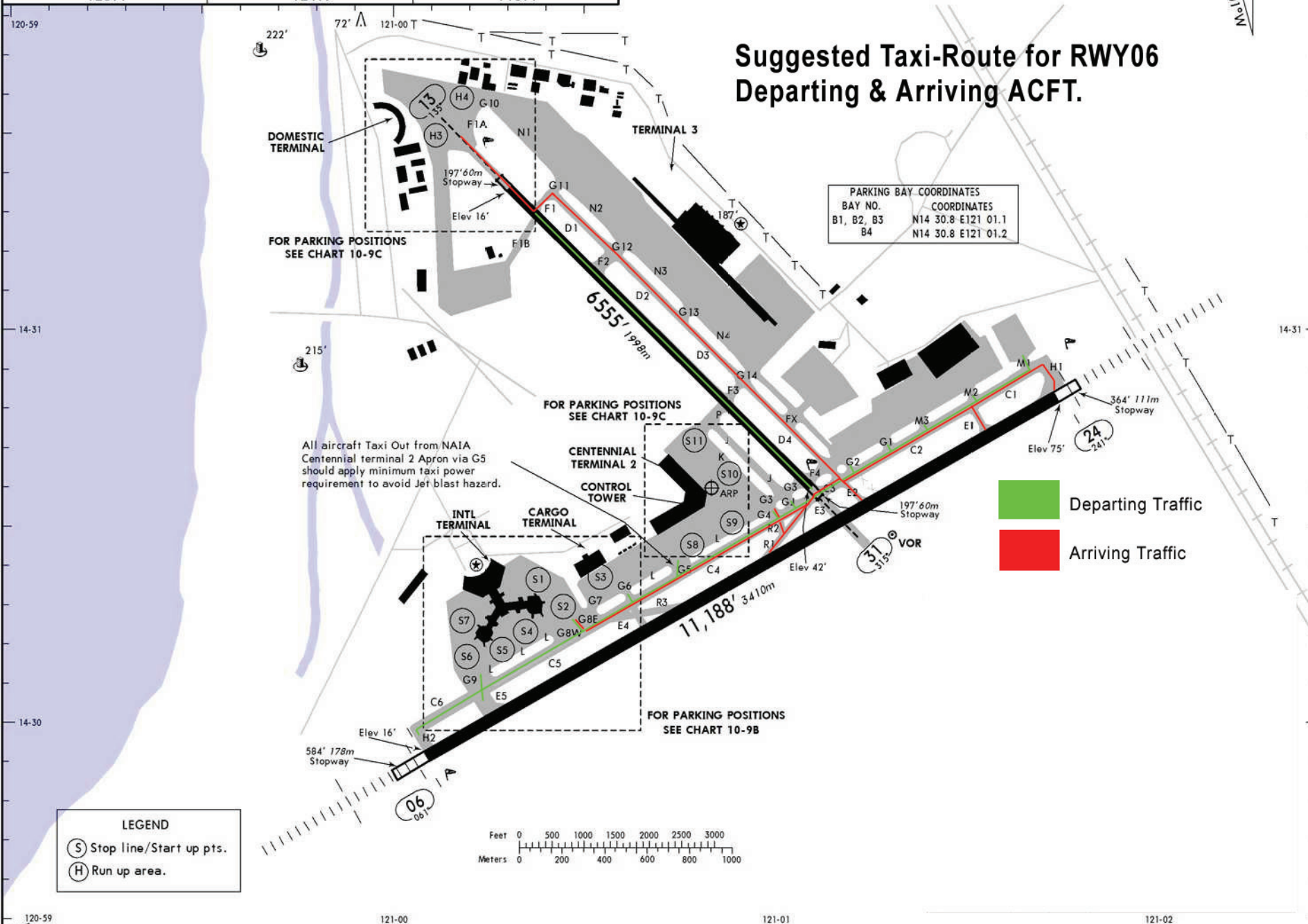
STRAIGHT-IN LANDING RWY 06			CIRCLE-TO-LAND		
MDA(H) 860' (844')			Not Authorized North of the Field Between Rwy 13 & 24		
	ALS out	Max Kts		MDA(H)	
A		100			
B		135			
C	3.7 km	180		860' (785') - 3.7 km	
D		205			

CHANGES: Domestic ramp frequency.

FOR FLIGHTSIM USE ONLY



ATIS 126.4	INTL Ramp 121.7	CENTENNIAL Ramp 128.8	DOMESTIC Ramp 123.25
VOT 117.7			
Clearance 125.1	Ground 121.9	Tower 118.1	



## GENERAL

Aircraft not exceeding 12,526 lbs (5682 kg) gross weight shall confine take-off and landing to Rwy 13/31 when conditions are favorable.  
Take-off and landing on Rwy 13/31 of A-330 and lower category aircraft allowed based on the following limitations.

1. Take-off on Rwy 13/31 during day and night flight operations;
2. Landing on Rwy 13/31 for day visual operations only.

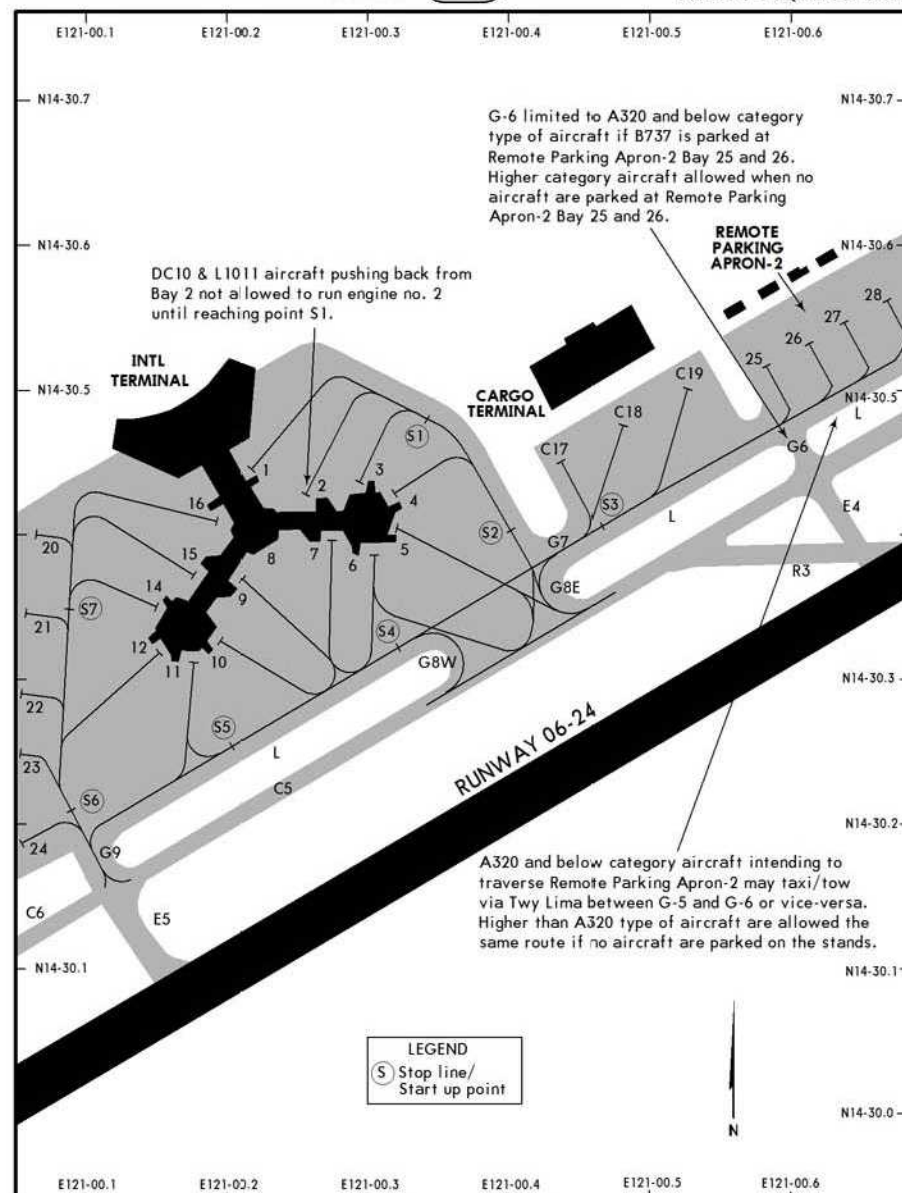
Take-off from Rwy 13 shall not be commenced from Taxiway F-1 and Taxiway F-1B.

### ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS		TAKE-OFF	WIDTH
		Threshold	Glide Slope		
06	HIRL CL ALSF-I PAPI (angle 3.0°)		10,203' 3110m		197'
24	HIRL CL SALSF PAPI (angle 3.0°)		9843' 3000m		60m

13	31	HIRL CL PAPI (angle 3.0°)				148'
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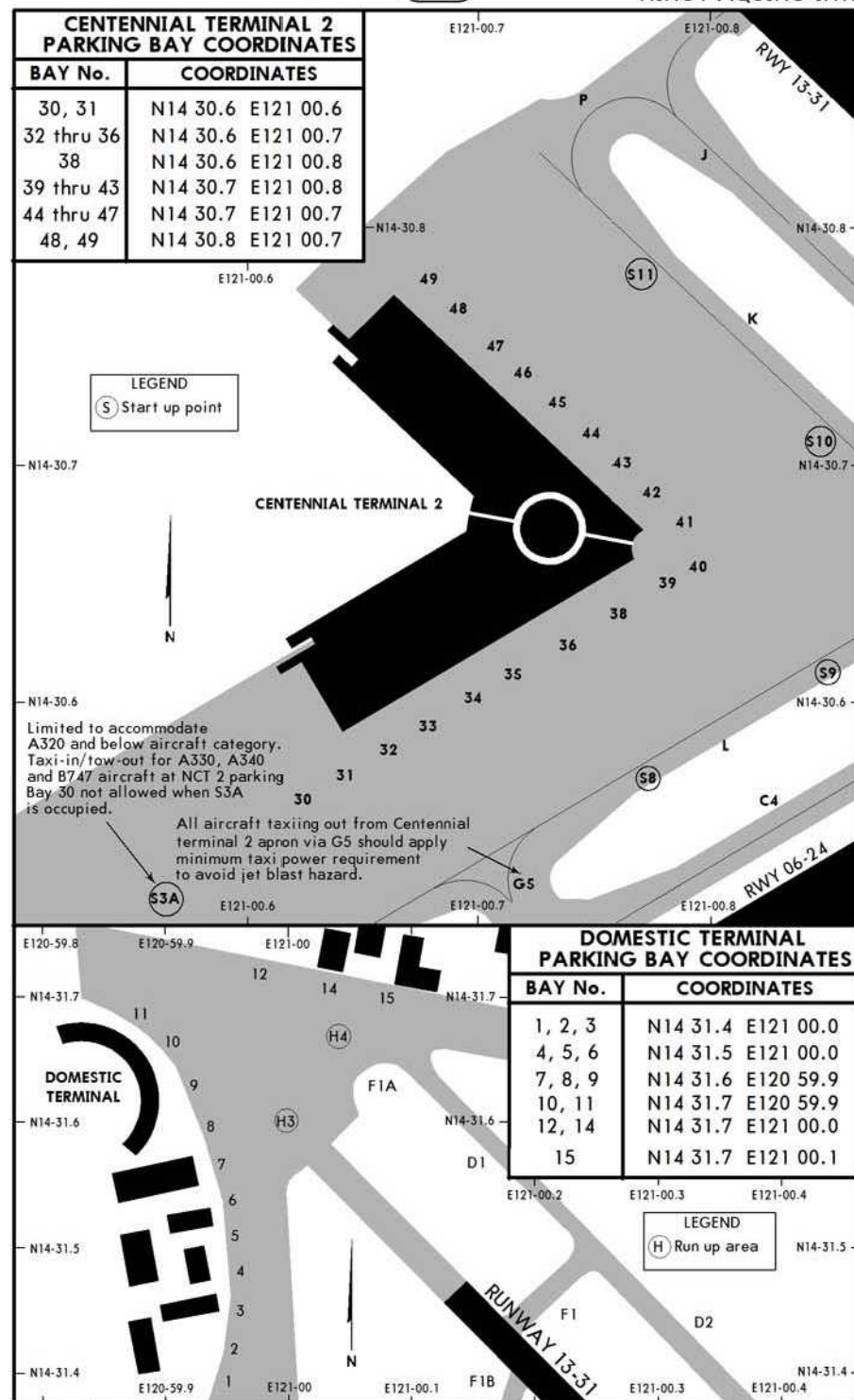
TAKE-OFF				
AIR CARRIER (JAA)			AIR CARRIER (FAR 121)	
LVP must be in Force			All Rwys	
All Rwys	All Rwys	All Rwys	Adequate Vis Ref	
RL & CL	RLCM (DAY only) or RL	RCLM (DAY only) or RL		
A			2 Eng	RVR 400m
B	RVR 200m	RVR 250m	3 & 4 Eng	
C				
D	RVR 250m	RVR 300m		
		RVR 400m		



## PARKING BAY COORDINATES

BAY No.		COORDINATES	BAY No.		COORDINATES
INTERNATIONAL TERMINAL			CARGO TERMINAL		
1		N14 30.4 E121 00.2	C17		N14 30.5 E121 00.4
2 thru 7		N14 30.4 E121 00.3	C18, C19		N14 30.5 E121 00.5
8, 9		N14 30.4 E121 00.2	REMOTE PARKING APRON-2		
10, 11, 12, 14		N14 30.3 E121 00.2	25 thru 28		N14 30.5 E121 00.6
15, 16		N14 30.4 E121 00.2			
20		N14 30.4 E121 00.0			
21, 22, 23		N14 30.3 E121 00.0			
24		N14 30.2 E121 00.0			



**CLEARANCE AND START-UP / PUSHBACK PROCEDURES**

Pilots intending to utilize ATS routes L-628 shall call Clearance Delivery for ATC clearance 5 minutes prior to block off / pushback time. Clearance shall be canceled if the aircraft has not blocked off / pushed back 5 minutes after receipt of ATC clearance. Other international flights shall call Clearance Delivery for ATC clearance 10 minutes prior to the estimated start-up time. Advise Clearance Delivery when ready for start-up/pushback.

Domestic flights shall call Clearance Delivery specifying preferred runway and request ATC clearance five minutes prior to estimated start-up time.

Any anticipated delay in start-up shall be relayed to Clearance Delivery. Failure to start engine(s) within the specified start-up time shall render the ATC clearance void.

Aircraft should not commence start-up, push back or any other maneuvers on the apron unless clearance from Ramp Control has been obtained. Request for clearance to start-up or push back shall be made only when the aircraft doors are closed and the aircraft is ready for departure.

Ramp Control will give taxi clearance after pushback / start-up for movement within the apron area. Change to Ground Control will be made prior to entering the main taxiway or as instructed by ATC. Do not proceed on to the main taxiway without clearance from Ground Control.

**SIMULTANEOUS OPERATIONS ON RWY 06/24 AND RWY 13/31****GENERAL**

During periods of traffic congestion, simultaneous operations on Rwy 06/24 and Rwy 13/31 may be authorized by the controller in accordance with the procedures and separation minima described below.

**DEPARTURES**

Between aircraft taking off on either Rwy 06 or Rwy 24 and:

- Aircraft taking off on Rwy 31* – No separation is necessary between the two departures regardless of type, provided that the departure on Rwy 31 shall commence its take-off not farther than the intersection of Rwy 31 and Rwy 06/24.
- Aircraft taking-off on Rwy 13* – Sufficient separation shall be effected between the two departures to ensure that the first departing aircraft shall have passed the intersection of the two runways before the second departing aircraft shall commence its take-off.

**ARRIVALS**

Between aircraft landing on either Rwy 06 or Rwy 24 ahead of an aircraft landing on Rwy 13, sufficient separation shall be effected between the two arrivals to ensure that the aircraft landing on Rwy 13 shall not cross the Pasay shoreline on its final glide until the landing aircraft on Rwy 06 or Rwy 24 shall have passed and is clear of the intersection of the two runways.

Between aircraft landing on Rwy 13 ahead of another aircraft landing on Rwy 06 or Rwy 24:

- The landing aircraft on Rwy 06 shall not cross the Las Pinas shoreline on its final glide until the landing aircraft on Rwy 13 shall have turned into the taxiway, or have made a 180° turn, or come to a full stop before reaching the intersection of Rwy 13 and Rwy 06/24.
- The landing aircraft on Rwy 24 shall not cross the line abeam the town of Taguig on its final glide until the landing aircraft on Rwy 13 shall have turned into the taxiway, or have made a 180° turn, or come to a full stop before reaching the intersection of Rwy 13 and Rwy 06/24.



Between aircraft landing on either Rwy 06 or Rwy 24 ahead of another aircraft:

- Landing on Rwy 31** – The landing aircraft on Rwy 31 shall not cross Laguna de Bay shoreline (abeam Meralco) on its final glide until the landing aircraft on either Rwy 06 or Rwy 24 shall have passed and is clear of the intersection of the two runways.
- Taking-off on Rwy 13** – Sufficient separation shall be effected between the two aircraft to ensure that the aircraft departing on Rwy 13 shall not commence its take-off until the landing aircraft on either Rwy 06 or Rwy 24, shall have passed, or have stopped short and will remain clear of, the intersection of the two runways.

Between aircraft landing on Rwy 31 ahead of another aircraft:

- Taking-off on either Rwy 06 or Rwy 24** – Sufficient separation shall be effected between the two aircraft to ensure that the departing aircraft on Rwy 06 or Rwy 24 shall not commence its take-off until the landing aircraft on Rwy 31 shall have turned onto a taxiway, or have made a 180° turn or made a full-stop before reaching the intersection of the two runways.
- Landing on either Rwy 06 or Rwy 24** – Sufficient separation shall be effected between the two aircraft to ensure that the landing aircraft on either Rwy 06 or Rwy 24 shall not cross Las Pinas shoreline or abeam the town of Taguig, as the case may be, on its final glide path until the landing aircraft on Rwy 31 shall have passed the intersection of the two runways.

Between aircraft departing on Rwy 13 ahead of another aircraft landing on either Rwy 06 or Rwy 24:

- Sufficient separation shall be effected between the two aircraft to ensure that the landing aircraft on either Rwy 06 or Rwy 24 shall not cross the Las Pinas shoreline or abeam the town of Taguig, as the case may be, on its final glide until the departing aircraft on Rwy 13 shall have passed the intersection of the two runways.
- Sufficient separation shall be effected between the two aircraft to ensure that a departing aircraft on Rwy 13 shall not converge with a landing aircraft on the downwind leg of either Rwy 06 or Rwy 24.

#### GO-AROUND PROCEDURES

**Rwy 24** – A LEFT TURN commencing from a line abeam Taguig town within an arc short of the runway threshold. However, for Jet aircraft they shall be made to pull-up and go around to re-enter downwind for Rwy 24 with pilots discretion when to make the turn to join downwind.

**Rwy 06** – A RIGHT TURN commencing Las Pinas shoreline within an arc short of the runway threshold. However, for Jet aircraft they shall be made to pull-up and go around to re-enter downwind for Rwy 06 with pilots discretion when to make turn to join downwind.

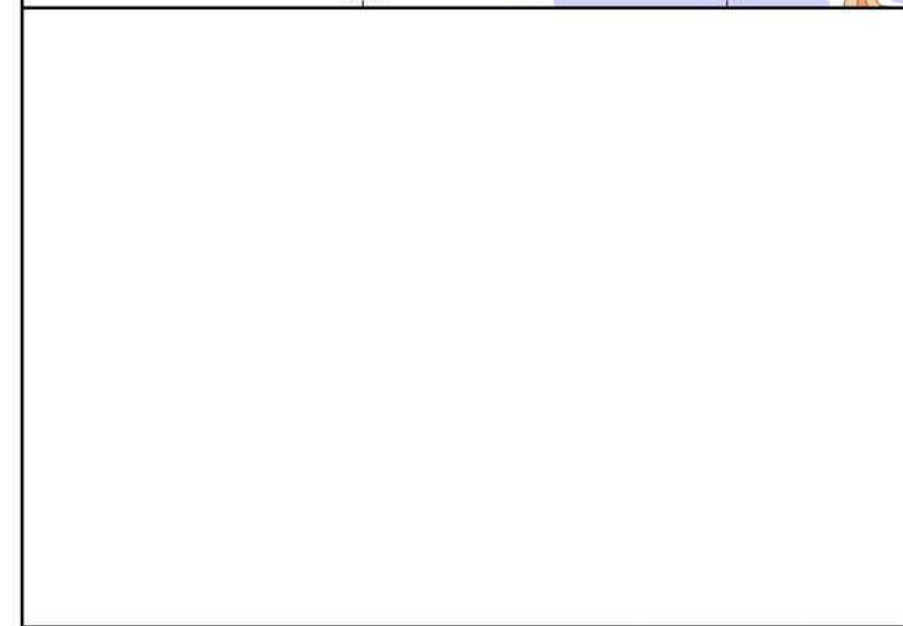
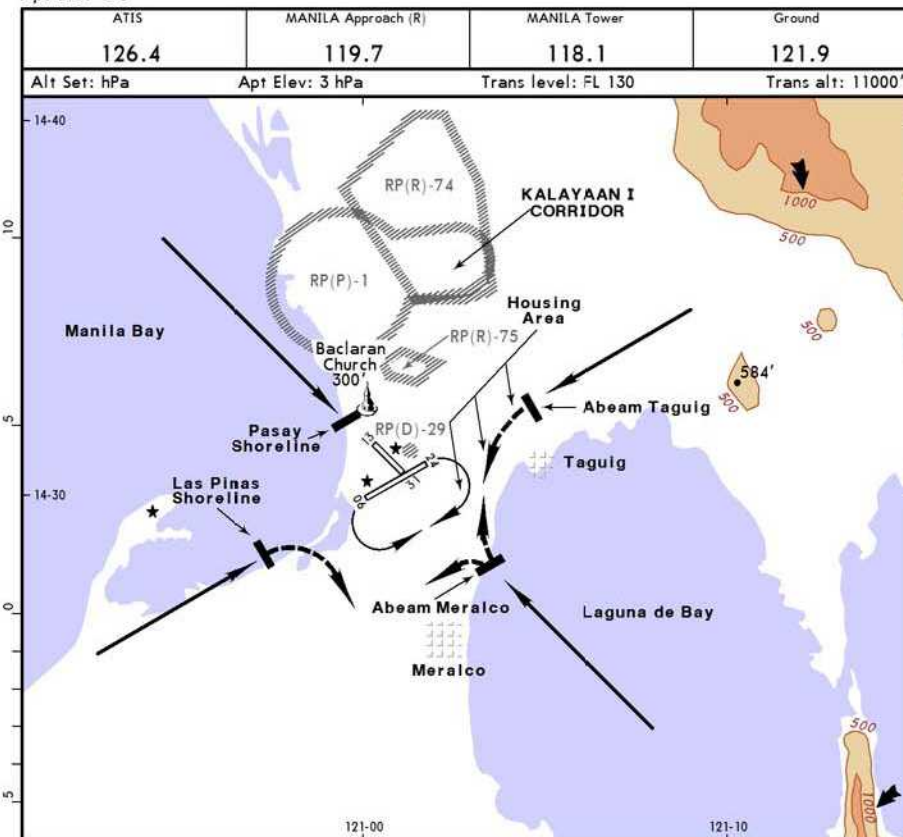
**Rwy 13** – For light aircraft (12,500 lbs and below), a RIGHT TURN from the Badaran church within an arc short of the threshold; for DG-3, HS-748, YS-11 and similar types from the Pasay shoreline.

**Rwy 31** – When Rwy 06 is in use, a RIGHT TURN commencing from Laguna de Bay shoreline abeam Meralco with an arc short of the housing area.

Simultaneous use of Rwy 06/24 and Rwy 13/31 for Jet aircraft shall be prohibited.

The controller on duty may deviate from the above procedures if in his best judgement such deviations are in the interest of safety and efficiency.

Apt Elev 75'



**ASSIGNMENT OF PARKING BAYS**

Assignment of parking bays at the International Passenger Terminal (IPT) and Cargo Terminal (ICT) Aprons, Balagbag Aprons and Remote Parking Aprons (RPA) shall be as follows:

**INTERNATIONAL PASSENGER TERMINAL****a. East Wing Apron (IPT)**

Bay 1 (Single Tunnel) – A300-600 and below category aircraft.

Bay 2 (Single Tunnel) – MD-11, DC10, A343, A342, A333, A332, A300-600, A320, A310, B767, B757, B737, B727, B707, L1011, DC8.

Bay 3 (Double Tunnel) – MD-11, DC10, A343, A342, A333, A332, A300-600, A320, A310, B767, B757, B727, B707, L1011, DC8.

*NOTE: Tow-in procedure with wingwalker for B744, B743, B742, B741, B777, B747SP.*

Bay 4 (Single Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B767, B757, B737, B727, B707, L1011, DC8, DC9.

*NOTE: Tow-in procedure with wingwalker for B744, B743, B742, B741, B777, B747SP.*

Bay 5 (Double Tunnel) – MD-11, DC10, A346, A345, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B772, B773, B767, B757, B727, B707, L1011, DC8.

*NOTE: A3446, & A345 utilizing first class tube on L1 door only due to bridge limitation.*

Bay 6 (Double Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, B744, B743, B742, B741, B747SP, B772, B773, B767.

Bay 7 (Single Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B737, B727, B707, B773, B772, L1011, DC8.

**b. Center Apron (IPT)**

Bay 8 has no aerobridge. Reserved for VIP aircraft parking only.

**c. West Wing Apron (IPT)**

Bay 9 (Double Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B727, B707, B773, B772, L1011, DC8.

Bay 10 (Single Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B727, B737, B707, B773, B772, L1011, DC8.

Bay 11 (Double Tunnel) – MD-11, DC10, A346, A345, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B727, B737, B707, B773, B772, L1011, DC8.

*NOTE: A346 & A345 utilizing first class tube on L1 door only due to bridge limitation.*

Bay 12 (Single Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B727, B737, B707, B773, B772, L1011, DC8.

Bay 14 (Double Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B727, B707, B773, B772, L1011, DC8.

Bay 15 (Single Tunnel) – MD-11, DC10, A343, A342, A333, A332, AB6, A310, A320, B744, B743, B742, B741, B747SP, B767, B757, B727, B737, B707, B773, B772, L1011, DC8.

Bay 16 (Single Tunnel) – MD-11, DC10, AB6, A310, A320, L1011, DC8, B767, B757, B727, B737, B707.

All inbound aircraft for IPT bay NR 12, 14, 15, and 16 should apply minimum power during taxi when either RPA 20 to 24 are occupied to avoid jet blast.

**CARGO APRON (ICT)**

ICT PT 17 – A300 and lower category aircraft.

ICT PT 18 and ICT PT 19 – B747-400 and lower category aircraft.

**REMOTE PARKING APRON (RPA)**

RPA 20 to RPA 24 – B747-400 and lower category aircraft.

All inbound aircraft for RPA 20 to 24 should apply minimum power during taxi when either IPT Bay NR 12, 14, 15, and 16 are occupied to avoid jet blast.

**BALAGBAG APRON**

B-1 to B-4 – A300 and lower category aircraft.

*NOTE: Three B747-400 are allowed to park at the Balagbag apron in case of emergency.*

**MANILA DOMESTIC TERMINAL APRON**

Bays 1 to 4 – A300, B737, YS-11, DHC-7, DC-9, Fokker and lower category aircraft.

*NOTE: Towing procedure for A300 park D3 and D4 nose out.*

Bay 5 to 11 – B737, YS-11, DHC-7, DC-9, Fokker and lower category aircraft.

Bay 12, 14 and 15 – YS-11, DHC-7, DC-9, Fokker and lower category aircraft.

*NOTE: Nose out towing procedure for aircraft parking D12, D14, and D15.*

**NAIA CENTENNIAL TERMINAL 2 APRON**

Remote 30P – B747-300, A340, A330, A320, B737 and lower category. Restriction: B747-300, A340 and A330 can occupy Bay 30P if Bay 30\* and 31\* are vacant and Bay 32P is occupied only by A320 and lower category.

Remote 30\* – B737 category. Restriction: Available if Bay 30P and 31\* are vacant.

Remote 31\* – B737 category. Restriction: Bay 31\* is available only if Bay 30P and 32P are vacant.

Remote 33P – A320 and lower category. Restriction: Available if Bay 32P is occupied only by A320 and lower category.

Remote 34P, 35P and 36P – A320 and lower category. Restriction: Follow solid nose-wheel guide line.

Remote 38P – B747-400 and lower category. Restriction: B747-400 shall be towed in to 38P if Bay 39P is occupied by B747-400.

Remote 39P – B747-400 and lower category. Restriction: B747-400 shall be towed in if Bay 38P is occupied by B747-400. A300 and above category are not allowed to move in/out if Bay 40\* is occupied.

Remote 40\* – A320 and lower category. Restriction: Last-in/first-out aircraft parking procedure if Bay 39P is occupied by A300 and above category.

Remote 41\* – B737 and lower category. Restriction: Available if Bay 39P, 40\* and 42P are vacant.

Remote 42P – B747-400 and lower category. Restriction: Available if Bay 41\* is vacant.

Remote 43P – B747-400 and lower category. Restriction: Available if Bay 44\* is vacant. B747-400 shall be towed in if Bay 45 is occupied by B747-400.

Remote 44\* – A320 and lower category. Restriction: Available if Bay 43P and 46\* are occupied only by A320 and lower category and if Bay 45P is vacant.

Remote 45P – B747-400, A340, A330 and lower category. Restriction: Available if Bay 44\* and 46\* are vacant. B747-400 shall be towed in if Bay 47P is occupied by B747-400.

Remote 46\* – A320 and lower category. Restriction: Available if Bay 45P is vacant and Bay 47P is occupied only by A320 and lower category.

Remote 47P – B747-400, A340, A330 and lower category. Restriction: Available if Bay 48\* is vacant. B747-400 shall be towed in if Bay 45P is occupied by B747-400.

Remote 48\* – A320 and lower category. Restriction: Available if Bay 47P is vacant and Bay 49P is occupied only by A320 and lower category.

Remote 49P – B747-400 and lower category. Restriction: B747-400, A340, A330 and MD-11 (power-in parking), due to a maneuvering restriction, aircraft will enter T-2 apron via G-3N only.



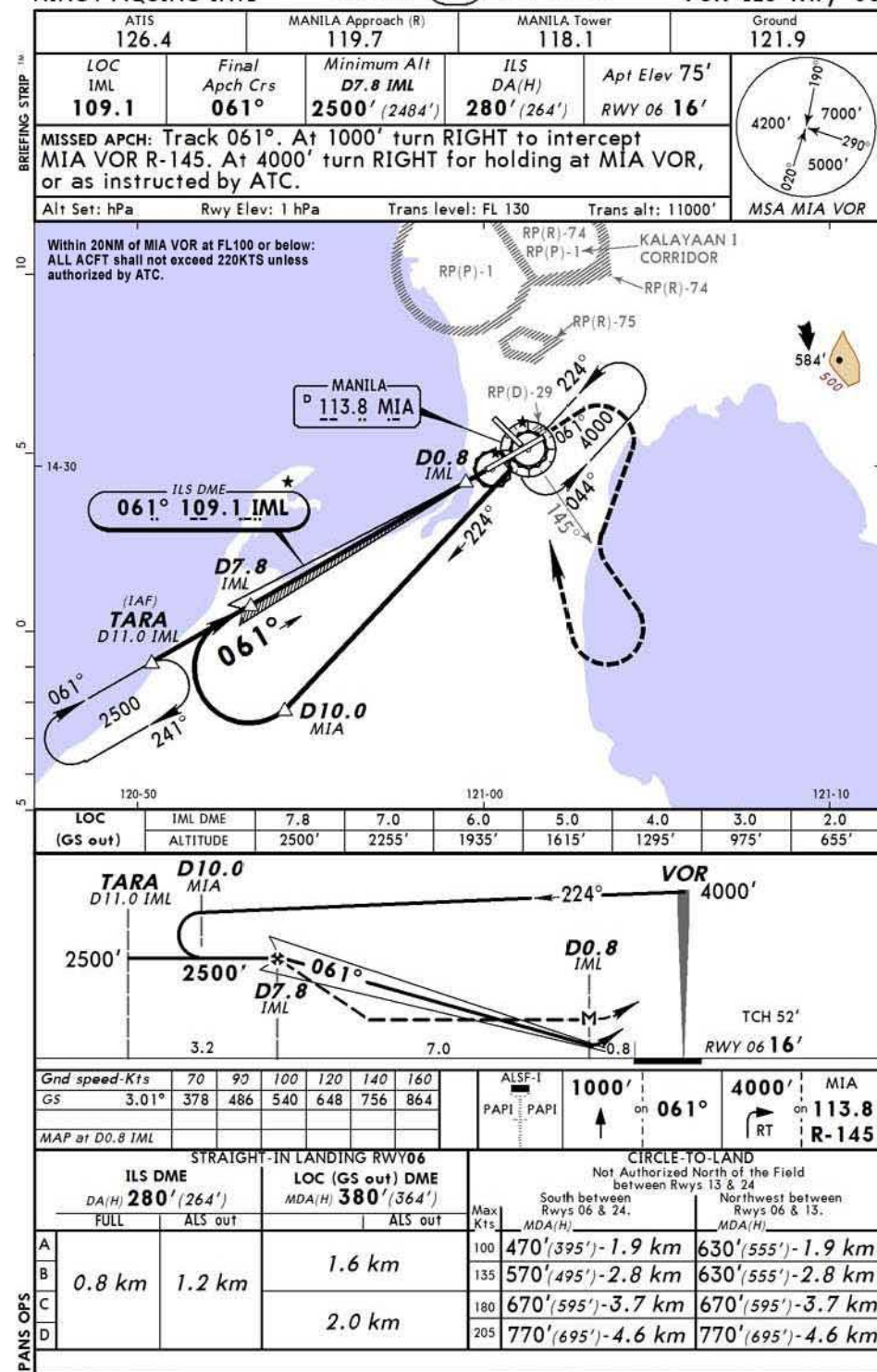
## NOTES:

1. Available aircraft stop marker according to category: B747, A340, A330, MD-11, A300, MD-82, A320, B737 and DC-9.
2. Bay 44, 46 and 48 will not utilize aerobridge.
3. Bay 47 and 49 limited for L-1 door aerobridge utilization for B747, A340, A330, MD-11 and B777.

## Legend:

\* - with dashed nosewheel guide line.

P - with solid nosewheel guide line.

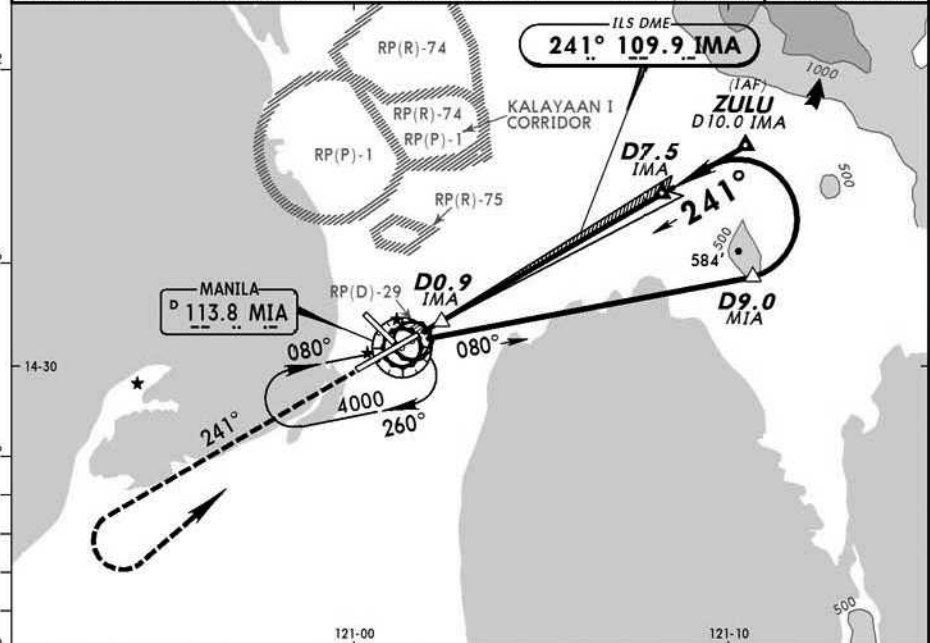


# RPLL/MNL MANILA, PHILIPPINES

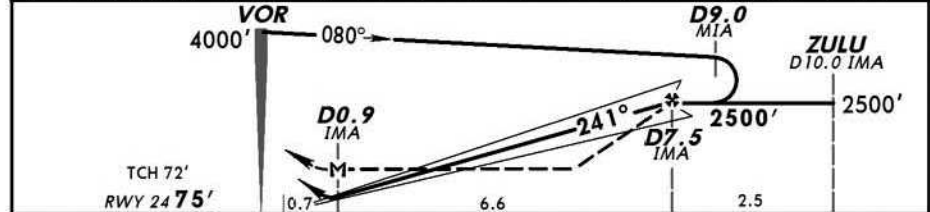
ATIS		MANILA Approach (R)		MANILA Tower		Ground	
126.4		119.7		118.1		121.9	
LOC IMA	Final Apch Crs	Minimum Alt	ILS DA(H)	Apt Elev 75'			
109.9	241°	D7.5 IMA	375' (300')	RWY 24 75'			

MISSED APCH: Track 241° on climb to 4000'. At 4000' turn LEFT for holding at MIA VOR, or as instructed by ATC.

Alt Set: hPa Rwy Elev: 3 hPa Trans level: FL 130 Trans alt: 11000' MSA MIA VOR



LOC (GS out)	IMA DME	2.0	3.0	4.0	5.0	6.0	7.0	7.5
ALTITUDE		725'	1050'	1375'	1700'	2025'	2350'	2500'



Gnd speed-Kts	70	90	100	120	140	160		SSALF	4000'	241°	LT	MIA
GS	3.06°	388	498	554	665	775	886	PAPI	PAPI			113.8

MAP at D0.9 IMA

STRAIGHT-IN LANDING RWY24				CIRCLE-TO-LAND			
ILS DME		LOC (GS out) DME		Not Authorized North of the Field Between Rwy 13 & 24			
DA(H) 375' (300')		MDA(H) 500' (425')					
FULL		ALS out					
A	0.8 km	1.2 km	1.8 km	Max Kts	MDA(H)	MDA(H)	
B				100	470' (395')-1.9 km	630' (555')-1.9 km	
C				135	570' (495')-2.8 km	630' (555')-2.8 km	
D				180	670' (595')-3.7 km	670' (595')-3.7 km	
				205	770' (695')-4.6 km	770' (695')-4.6 km	

CHANGES: Procedure. FOR FLIGHTSIM USE ONLY

# RPLL/MNL MANILA, PHILIPPINES

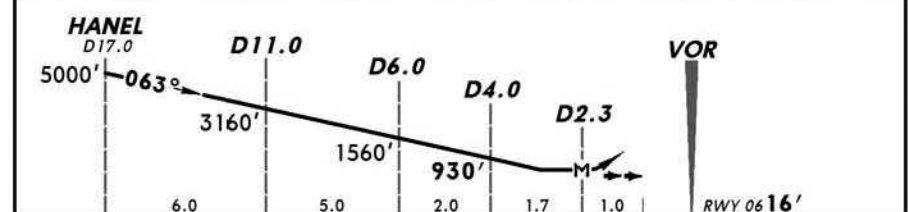
ATIS		MANILA Approach (R)		MANILA Tower		Ground	
126.4		119.7		118.1		121.9	
VOR MIA	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 75'			
113.8	063°	D4.0	380' (364')	RWY 06 16'			

MISSED APCH: Climb to 1000'. Then RIGHT climbing turn to MIA VOR R-145. Return to MIA VOR at 4000' or as instructed by ATC.

Alt Set: hPa Rwy Elev: 1 hPa Trans Level: FL 130 Trans alt: 11000' MSA MIA VOR



MIA DME	8.0	7.0	6.0	5.0	4.0	3.0	2.3
ALTITUDE	2200'	1880'	1560'	1250'	930'	610'	380'




Gnd speed-Kts	70	90	100	120	140	160		SSALF	1000'	RT	MIA
GS	3.06°	388	498	554	665	775	886	PAPI	PAPI		113.8

MAP at D2.3

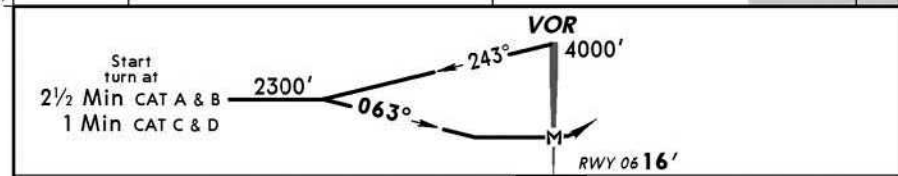
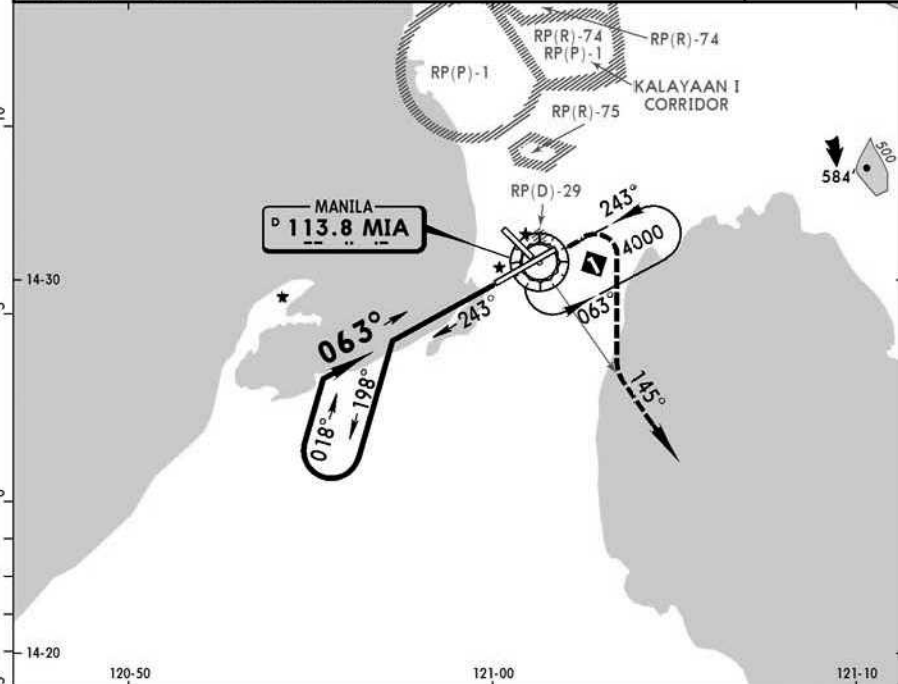
STRAIGHT-IN LANDING RWY06				CIRCLE-TO-LAND			
ILS DME		LOC (GS out) DME		Not Authorized North of the Field Between Rwy 13 & 24			
DA(H) 375' (300')		MDA(H) 500' (425')					
FULL		ALS out					
A	0.8 km	1.2 km	1.8 km	Max Kts	MDA(H)	MDA(H)	
B				100	470' (395')-1.9 km	630' (555')-1.9 km	
C				135	570' (495')-2.8 km	630' (555')-2.8 km	
D				180	670' (595')-3.7 km	670' (595')-3.7 km	
				205	770' (695')-4.6 km	770' (695')-4.6 km	

CHANGES: Procedure. FOR FLIGHTSIM USE ONLY

# RPLL/MNL NINOY AQUINO INTL 27 AUG 04 (13-2) Eff 2 Sep MANILA, PHILIPPINES VOR Rwy 06

BRIEFING STRIP	ATIS		IAANILA Approach (R)		MANILA Tower		Ground	
	126.4		119.7		118.1		121.9	
	VOR MIA	Final Apch Crs	No FAF		MDA(H)	Apt Elev 75'		
	113.8	063°			660' (644')	RWY 06 16'		
	MISSED APCH: Climb to 1000', then RIGHT climbing turn to MIA VOR R-145. Return to MIA VOR at 4000' or as instructed by ATC.							
Alt Set: hPa      Rwy Elev: 1 hPa      Trans level: FL 130      Trans alt: 11000' 1. Based on TAS 140 kts (still air) for Cat A & B aircraft only and based on TAS of 225 kts (still air) for Cat C & D aircraft only.								

MSA MIA VOR



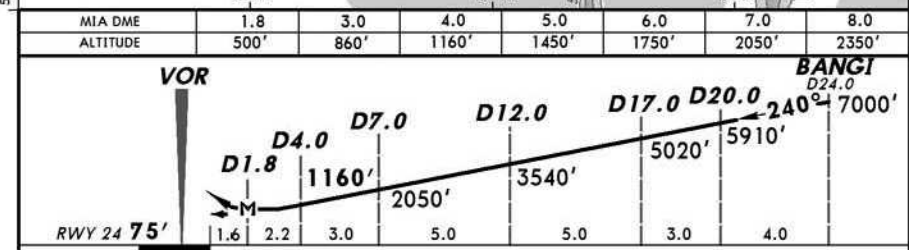
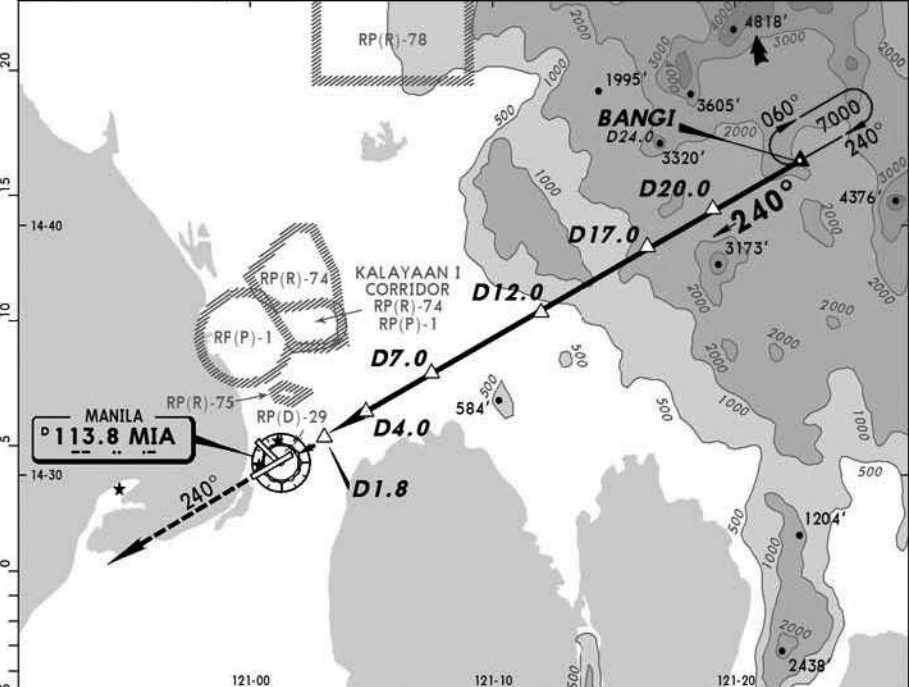
				ALS-I	1000'	RT	MIA
				PAPI	PAPI		113.8
MAP at VOR							R-145

STRAIGHT-IN LANDING RWY06			CIRCLE-TO-LAND		
MDA(H) 660' (644')			Not Authorized North of the Field Between Rwy 13 & 24		
ALS out			MDA(H)		
A	1.6 km		100	660' (585') - 1.8 km	
B			135	660' (585') - 2.8 km	
C	2.8 km		180	680' (605') - 3.7 km	
D	3.7 km		205	780' (705') - 4.6 km	

CHANGES: None. FOR FLIGHTSIM USE ONLY

# RPLL/MNL NINOY AQUINO INTL 27 AUG 04 (13-3) Eff 2 Sep MANILA, PHILIPPINES VOR DME Rwy 24

ATIS		MANILA Approach (R)		MANILA Tower		Ground
126.4		119.7		118.1		121.9
VOR MIA	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev		
113.8	240°	D4.0	500' (425')	75'		
RWY 24 75'						
<b>MISSED APCH:</b> Climb on MIA VOR R-240 to 4000'. Return to MIA VOR or as instructed by ATC.						
Alt Set: hPa Rwy Elev: 3 hPa Trans level: FL 130 Trans alt: 11000' MSA MIA VOR						



				SSALF	4000'	MIA
				PAPI	PAPI	113.8
MAP at D1.8						R-240

STRAIGHT-IN LANDING RWY24			CIRCLE-TO-LAND		
MDA(H) 500' (425')			Not Authorized North of the Field Between Rwy 13 & 24		
ALS out			MDA(H)		
A	1.6 km		100	500' (425') - 1.9 km	
B			135	580' (505') - 2.8 km	
C	2.0 km		180	680' (605') - 3.7 km	
D	2.4 km		205	780' (705') - 4.6 km	

CHANGES: DME distances and altitudes. FOR FLIGHTSIM USE ONLY



**NOTAMS for April 15 VATSIM Fly-in within MANILA FIR:**

Manila ACC North Sector - 119.30 (RPHI\_N\_CTR)  
 Manila Approach/Departure - 119.70 (RPLL\_V\_APP)  
 Manila Tower - 118.10 (RPLL\_V\_TWR)  
 Manila Clearance/Ramp - 121.90 (RPLL\_V\_GND)

**Hand-off / Transfer Points:**

A461 awy - NOMAN  
 B348 awy - POTIB

**Preferred Routes:****Departures:**

Manila -> Hong Kong (RPLL-VHHH)  
 -SID1.CAB.A461.NOMAN.NOMAN1A/B  
 -SID15.CIA.W16.AVMUP.A461.NOMAN.NOMAN1A/B

Manila -> Taipei (RPLL-RCTP)  
 -SID1.CAB.B462.LAO.B348.POTIB

**Arrivals:**

Hong Kong -> Manila (VHHH-RPLL)  
 -OCEAN dep NOMAN.A461.AVMUP.W16.CIA.STAR15->MIA

Taipei -> Manila (RCTP-RPLL)  
 -POTIB.B348.ALPAS.STAR16->MIA

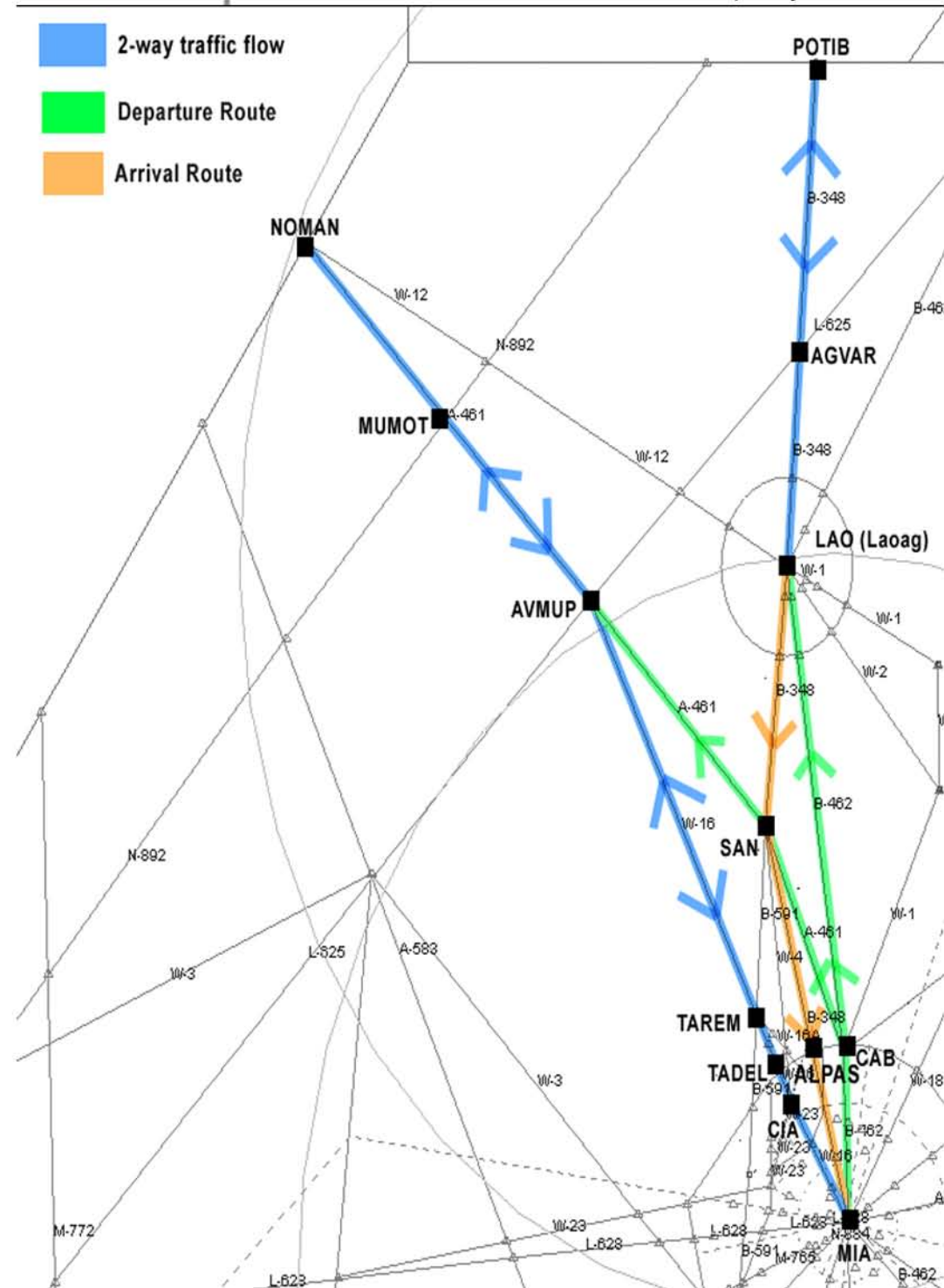
**Flight Level Assignments:**

See FLAS page. RVSM altitudes may be assigned by ATC  
 to RVSM-compliant ACFTS if required.

Incase a holding pattern is to be issued by ATC,  
 any of the ff. intersections may be given:

RADEG  
 MIA  
 BATAN  
 HANEL

For further information:  
 Vatsim Philippines  
 peter@philskies.net  
 Charts: [www.philskies.net/library/Charts/new](http://www.philskies.net/library/Charts/new)  
[www.philskies.net/forum](http://www.philskies.net/forum)



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## 1.2 Flight Level Assignment Scheme (FLAS) with adjacent FIRs.

<i>FIR</i>	<i>Flight Level Assignment</i>	<i>Route</i>	<i>Remarks</i>
Manila – Japan (Naha FIR)	FL290, 310, 330, 350, 370, 390, 410	A582, A590, B462	Naha implementing RVSM between FL290 – FL410
Japan (Naha FIR) – Manila	FL300, 320, 340, 360, 380, 400		
Manila – Oakland, U.S.A.	FL290, 310, 330, 350, 370, 390, 410	G467, R337	Oakland implementing RVSM between FL290 – FL410 Manila implementing RVSM between FL310-FL410 within the Manila South Sector Areas.
Oakland, U.S.A – Manila	FL300, 320, 340, 360, 380, 400		
Manila – Kota Kinabalu	FL310, 350, 390	B348, M754/B584	Kota Kinabalu implementing RVSM between FL290 – FL410.
	FL320, 340, 360, 380, 400	A341	
Kota Kinabalu – Manila	FL290, 330, 370, 410	B348, M754/B584 A341	Bi-directional route South China Sea (SCS)
Manila – Singapore	FL300, 320, 340, 360, 380, 400	M767	RNAV-RNP10 one-way route: SCS
Singapore – Manila		N884	Singapore implementing RVSM between FL290 – FL410
Manila – Ho Chi Minh	FL300, 320, 340, 360, 380, 400	N892	RNAV-RNP10 one-way route: SCS.
	FL280, 350	L628	Bi-directional route SCS
	FL260, 280, 390	M765	for Westbound TFC up to PAN DI
	FL260, 390		for Westbound TFC after PAN DI
	FL280	N500	Within HCM FIR
Ho Chi Minh – Manila	FL300, 320, 340, 360, 380, 400	L625	RNAV-RNP10 one-way route: SCS. Ho Chi Minh implementing RVSM FL290 – FL410
	FL290, 370	L628	Bi-directional route SCS
	FL270, 370	M765	for Eastbound TFC up to PAN DI
	FL270, 290		for Eastbound TFC after PAN DI
** Manila – Hong Kong	FL310, 350, 390	A461, A583, W12	Hong Kong FIR will implement RVSM on October 31, 2002 between FL290 – FL410
** Hong Kong – Manila	FL290, 330, 370, 410		
Manila – Taipei	FL290, 330, 370, 410	B348	Bi-directional route SCS
	FL310, 350, 390	R596	Based on existing tripartite LOA on R596 between Naha, Manila, Taipei
Taipei – Manila	FL300, 320, 340, 360, 380, 400	N892	Modified-single alternate FLO for SCS routes
	FL310, 350, 390	B348	
	FL330, 370, 410	R596	
Manila – Ujung Pandang	FL330, 370, 410	A461, R590, B472, B473, B462	Ujung Pandang implementing RVSM on October 31, 2002 between FL350 – FL390 (Single-Alternate)
	FL380	G578	
	FL360	A339	Ujung Pandang will transition North-Westbound traffic to Modified Single-Alternate on routes crossing through RNAV Parallel routes (A461, R590, B472, B473, B462)
	FL360, 380	R342	
Ujung Pandang – Manila	FL310, 350, 390	A461, R590, B472, B473, B462	Manila will transition traffic on westbound routes G578, A339, R342
	FL330, 370, 410	G578, A339, R342	

**NOTE:** Assignment of flight levels for traffic operating inside Manila South Sector areas between FL310 – FL410 (RVSM Compliant), shall be in accordance with ICAO Annex 2, Appendix 3 b). Availability of even flight levels: FL320, FL340, FL360, FL380, FL400 shall be on a prior approval basis.

## 7. Flight planning requirements

7.1 Unless special arrangement is made as detailed below, RVSM approval is required for operators and aircraft to operate within designated RVSM airspace. The operator must determine that the appropriate State authority has granted them RVSM operational approval and they will meet the RVSM requirements for the filed route of flight and any planned alternate routes. The letter "W" shall be inserted in item 10 (Equipment) of the ICAO standard flight plan to indicate that both the aircraft and operator are RVSM approved.

## 8. Procedures for operation of non-RVSM compliant aircraft in RVSM airspace

8.1 **Flight priority.** RVSM approved aircraft will be given priority for level allocation over non-RVSM approved aircraft.

8.2 **Vertical separation applied.** The vertical separation minimum between non-RVSM aircraft operating in the RVSM stratum and all other aircraft is 2,000 ft.

8.3 **Phraseology.** Non-RVSM compliant aircraft operating in RVSM airspace should use the phraseology contained in Table 8.3-1

**Table 8.3-1 - Phraseology Related to RVSM Operations**

Message	Phraseology
<b>Controller-pilot phraseology:</b>	
a. For a controller to ascertain the RVSM approval status of an aircraft:	(call sign) CONFIRM RVSM APPROVED
b. For a pilot to report non-RVSM approval status:	NEGATIVE RVSM*
i. on the initial call on any frequency within the RVSM airspace (controllers shall provide a readback with this same phrase), and	
ii. in all requests for flight level changes pertaining to flight levels within the RVSM airspace; and	
iii. in all read-backs to flight level clearances pertaining to flight levels within the RVSM airspace.	
Additionally, except for State aircraft, pilots shall include this phrase to read back flight level clearances involving the vertical transit through FL 290 or FL 410.	
c. For a pilot to report RVSM approval status.	AFFIRM RVSM*
d. For a pilot of a non-RVSM approved State aircraft to report non-RVSM approval status, in response to the phrase (call sign) CONFIRM RVSM APPROVED.	NEGATIVE RVSM STATE AIRCRAFT*
e. Denial of clearance into the RVSM airspace:	(call sign) UNABLE CLEARANCE INTO RVSM AIRSPACE. MAINTAIN [or DESCEND TO, or CLIMB TO] FLIGHT LEVEL (number)
f. For a pilot to report when severe turbulence affects the aircraft's capability to maintain the height-keeping requirements for RVSM.	UNABLE RVSM DUE TURBULENCE*
g. For a pilot to report that the aircraft's equipment has degraded enroute below that required for flight within the RVSM airspace. (See Attachment A)	UNABLE RVSM DUE EQUIPMENT*
(This phrase is to be used to convey both the initial indication of the non-ILASPS compliance, and henceforth, on initial contact on all frequencies within the lateral limits of the RVSM airspace until such time as the problem ceases to exist, or the aircraft has exited the RVSM airspace.)	
h. For a pilot to report the ability to resume operations within the RVSM airspace after an equipment or weather-related contingency.	READY TO RESUME RVSM*
i. For a controller to confirm that an aircraft has regained its RVSM approval status, or to confirm that the pilot is ready to resume RVSM operations.	REPORTABLE TO RESUME RVSM
<b>Coordination between ATS units:</b>	
a. To verbally supplement an automated estimate message exchange which does not automatically transfer item 18 flight plan information.	NEGATIVE RVSM or NEGATIVE RVSM STATE AIRCRAFT [as applicable]
b. To verbally supplement estimate messages of non-RVSM approved aircraft.	NEGATIVE RVSM or NEGATIVE RVSM STATE AIRCRAFT [as applicable]
c. To communicate the cause of a contingency relating to an aircraft that is unable to conduct RVSM operations due to severe turbulence or other severe weather-related phenomenon [or equipment failure, as applicable].	UNABLE RVSM DUE TURBULENCE [or EQUIPMENT, as applicable]

*Example 1: A non-RVSM approved aircraft, maintaining FL 260, subsequently requests a climb to FL 320.*

Pilot : (call sign) REQUEST FL 320,  
NEGATIVE RVSM

Controller : (call sign) CLIMB TO FL 320

Pilot : (call sign) CLIMB TO FL 320,  
NEGATIVE RVSM

*Example 2: A non-RVSM approved aircraft, maintaining FL 260, subsequently requests a climb to FL 430.*

Pilot : (call sign) REQUEST FL 430,  
NEGATIVE RVSM

Controller : (call sign) CLIMB TO FL 430

Pilot : (call sign) CLIMB TO FL 430,  
NEGATIVE RVSM

*Example 3: A non-RVSM approved aircraft, maintaining FL 360, subsequently requests a climb to FL 380.*

Pilot : (call sign) REQUEST FL 380,  
NEGATIVE RVSM

Controller : (call sign) CLIMB TO FL 380

Pilot : (call sign) CLIMB TO FL 380,  
NEGATIVE RVSM

*Example 4: A non-RVSM approved civil aircraft maintaining FL 280, subsequently requests a climb to FL 320.*

Pilot : (call sign) REQUEST FL 320,  
NEGATIVE RVSM

Controller : (call sign) UNABLE  
CLEARANCE INTO RVSM  
AIRSPACE, MAINTAIN FL 280

**8.4 Continuous climb/descent of non-compliant aircraft through RVSM airspace.** Non-RVSM compliant aircraft may be cleared to climb to and operate above FL290 or descend to and operate below FL410 provided that they:

a. Do not climb or descend at less than the normal rate for the aircraft; and

b. Do not level off at an intermediate level while passing through the RVSM stratum.

**8.5 Special coordination procedures for cruise operation of non-RVSM compliant aircraft in RVSM airspace.** Non-RVSM compliant aircraft may not flight plan between FL290 and FL410 inclusive within RVSM airspace. After special coordination as detailed in 8.5.1 below, the following non-RVSM aircraft may flight plan at RVSM flight levels in the RVSM stratum:

a. The aircraft is being initially delivered to the State of Registry or Operator (see Paragraph 12 for additional details and information); or

b. The aircraft was formally RVSM approved but has experienced an equipment failure and is being flown to a maintenance facility for repair in order to meet RVSM requirements and/or obtain approval; or

c. The aircraft is transporting a spare engine mounted under the wing; or

d. The aircraft is being utilized for mercy or humanitarian purposes; or

e. State aircraft (those aircraft used in military, custom and police services shall be deemed state aircraft)

*NOTE: The procedures are intended exclusively for the purposes indicated and not as a means to circumvent the normal RVSM approval process.*

**8.5.1** The assignment of cruising levels to non-RVSM compliant aircraft listed in paragraph 8.5 (a) to (e) shall be subject to an ATC clearance. Aircraft operator shall include the "STS/Category of operations (i.e., FERRY / HUMANITARIAN / MILITARY / CUSTOMS / POLICE) / NON-RVSM COMPLIANT" in Field 18 of the ICAO Flight Plan.



## 2. Airworthiness and operational approval and monitoring

**2.1 Approval Date.** Operator/aircraft approval by 1 January 2002 will enable air traffic service providers to plan for orderly RVSM implementation.

**2.2 Approval Process.** Operators must obtain airworthiness and operational approval from the State of Registry or State of the Operator, as appropriate, to conduct RVSM operations.

**2.3 Aircraft Monitoring.** Operators are required to participate in the RVSM aircraft-monitoring program. The Monitoring Agency for Asia Region (MAAR) will process the results of monitoring.

**2.3.1** Monitoring accomplished for other regions can be used to fulfill the monitoring requirements for the Asia/Pacific region. The MAAR will coordinate with other monitoring agencies to access this information. For monitoring services in the Asia/Pacific region, operators should contact the MAAR monitoring contractor as follows:

Fax: +66-2-297-8155  
Email: maar@aerothai.co.th

## 3. ACAS II and transponder equipage

**3.1** Aircraft equipped with ACAS and operated in RVSM airspace must be equipped with ACAS II. (TCAS II systems with Version 7.0 incorporated meet ICAO ACAS II standards).

**3.2** Operators must take action to inform themselves of ACAS II equipage requirements and plan for compliance.

**3.3 International General Aviation (IGA) Transponder Equipage.** IGA airplanes shall be equipped with a pressure altitude reporting transponder certified by the appropriate State authority as meeting the provisions of Annex 10.

## 4. In-flight procedures within RVSM airspace

**4.1** Before entering RVSM airspace, the pilot should review the status of required equipment. The following equipment should be operating normally:

- two primary altimetry systems;
- one automatic altitude-keeping device; and
- one altitude-alerting device.

**4.2** The pilot must notify ATC whenever the aircraft:

- is no longer RVSM compliant due to equipment failure; or
- experiences loss of redundancy of altimetry systems; or
- encounters turbulence that affects the capability to maintain flight level.

**4.3 Transition between FLs:** During cleared transition between levels, the aircraft should not overshoot or undershoot the assigned FL by more than 150 ft (45 m).

**4.4 Pilot Level Call.** Except in an ADS or radar environment, pilots shall report reaching any altitude assigned within RVSM airspace.

**4.5 Contingency Procedures.** ENR 1.8.1 paragraphs 1, 2 & 3 contain procedures for in-flight contingencies that have been updated for RVSM operations. The contingency procedures in ENR 1.8.1 paragraphs 1-2 and the offset procedures in paragraph 6 stated below should be applied in oceanic operations. The weather deviation procedures in ENR 1.8.1 paragraph 3 may be applied in all airspace in the region.

## 5. Special procedures to mitigate wake turbulence encounters and distracting aircraft system alerts in the oceanic airspace of the Manila FIR

**5.1** The following special procedures are applicable to mitigate wake turbulence or distracting aircraft system alerts (e.g., ACAS, Ground Proximity Warning System (GPWS)) in Asia and Pacific airspace where RVSM is applied:

**NOTE:** In the contingency circumstances below, ATC will not issue clearances for lateral offsets and will not normally respond to actions taken by the pilots.

**5.2** An aircraft that encounters wake vortex turbulence or experiences distracting aircraft system alerts shall notify ATC and request a flight level, track or speed change to avoid the condition. However, in situations where such a change is not possible or practicable, the pilot may initiate the following temporary lateral offset procedure with the intention of returning to center line as soon as practicable:

- the pilot should establish contact with other aircraft, if possible, on the appropriate VHF inter-pilot air to air frequency; 123.45 MHz, and
- one (or both) aircraft may initiate lateral offset(s) not to exceed 2 NM from the assigned track, provided that:
  - as soon as practicable to do so, the offsetting aircraft notify ATC that *temporary lateral offset action has been taken and specify the reason for doing so (ATC will not normally respond)*; and

ii) the offsetting aircraft notify ATC when re-established on assigned route(s) or track(s) (*ATC will not normally respond*).

## 6. Transition Areas

**6.1** Below are the identified transition areas (Figure 6.1.1 – RVSM Transition Area Chart) and procedures within the Manila FIR.

VERTICAL Transition Areas	Flights Concerned
After Manila VOR	Westbound overflights coming via A590, A582, G467, joining RNAV routes L628, M765
Upon radar contact between LULBU and LUBANG (ABM LUBANG)	Eastbound overflights via RNAV route N884, joining A590, A582, G467 or ENDAX
Upon radar contact between AKOTA and AGVAR	Eastbound overflights on RNAV route L625, joining B348, MEVIN B461
within RADAR COVERAGE	Other flights not covered above

Figure 6.1-1 RVSM Transition Area Chart

